Psychosis, Trauma and Dissociation

Psychosis, Trauma and Dissociation

Evolving Perspectives on Severe Psychopathology

Second Edition

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WILEY Blackwell

This edition first published 2019
© 2019 John Wiley & Sons Ltd

Edition History
John Wiley & Sons Ltd (1e, 2008)

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Registered Office(s)
John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, USA
John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK

Editorial Office
111 River Street, Hoboken, NJ 07030, USA

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Library of Congress Cataloging-in-Publication Data

Names: Moskowitz, Andrew, editor. | Dorahy, Martin J., 1971– editor. | Schäfer, Ingo, 1971– editor.
Title: Psychosis, trauma and dissociation : evolving perspectives on severe psychopathology / [edited by] Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
Other titles: Psychosis, trauma, and dissociation
Description: Second edition. | Hoboken, NJ : Wiley, 2019. | Preceded by Psychosis, trauma and dissociation / editor, Andrew Moskowitz, Ingo Schäfer, Martin J. Dorahy. 2008. | Includes bibliographical references and index. |
Identifiers: LCCN 2018032832 (print) | LCCN 2018033841 (ebook) | ISBN 9781118586037 (Adobe PDF) | ISBN 9781118586020 (ePub) | ISBN 9781119952855 (hardback)
Subjects: | MESH: Psychotic Disorders | Dissociative Disorders | Schizophrenia | Stress Disorders, Traumatic
Classification: LCC RC467 (ebook) | LCC RC467 (print) | NLM WM 200 | DDC 616.89–dc23
LC record available at https://lccn.loc.gov/2018032832

Cover Design: Wiley
Cover Image: © Wassily Kandinsky/Wikimedia Commons/Public Domain

Set in 10/12pt Warnock by SPi Global, Pondicherry, India

10 9 8 7 6 5 4 3 2 1

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Cherie Armour, PhD, is Professor of Psychological Trauma and Mental Health in the School of Psychology, as well as Associate Dean for Research and Impact in the Faculty of Life and Health Sciences, at Ulster University, UK. Her research utilizes large-scale epidemiological data to examine the prevalence of trauma experiences and psychological disorders. A focus of Professor Armour's research has been the categorization of Post-traumatic Stress Disorder in the Diagnostic and Statistical Manual of Mental Disorders, particularly with regard to the validity of PTSD symptom groups and the dissociative PTSD subtype.

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Foreword from the Trauma Field

Chris R. Brewin

A recent feature of mental health care in England has been the introduction of patient 'clustering', a process which often requires clinicians to distinguish between 'psychotic' and 'non-psychotic' conditions – this decision is often the precursor to patients being assigned to separate groups of services. Readers of this book will not be surprised to learn that many patients report a complex intermingling of symptoms, leading to the question of whether this assumption of two mutually exclusive groups is helpful. Indeed, exploration of the distinction between post-traumatic and psychotic conditions, and how to treat them when they occur together, has been a major focus of research over the last 10 years, and the first edition of this book (2008) was one of the texts that helped to establish the importance of this emerging field. By drawing attention to the central role of dissociation it provided some important concepts and tools for looking in more detail at the mechanisms that underpin symptoms that straddle the divide between 'psychotic' and 'non-psychotic'. The second edition brings this research up-to-date and demonstrates how much the field has developed in the intervening years.

In my own clinical practice with people suffering from post-traumatic stress disorder (PTSD), I noted the existence of auditory hallucinations some years ago. The first occasion was when I was questioning a patient about why he felt so guilty for the death of some of his companions in an ambush by armed men, when he appeared to be blameless. It was then that he disclosed the presence of an internal voice that repeatedly emphasized the incident was his fault, a conclusion he felt unable to dispute. Since then I have realized that hallucinations of this kind are a relatively common symptom, confirming their presence both in a military sample and in a sample of civilians with more complex presentations (Brewin & Patel, 2010).

Nevertheless, interest in this phenomenon is coming mainly from those in the psychosis field; mention of hallucinations, with the exception of a few studies in the military, is almost entirely absent from the clinical literature authored by PTSD experts. I remain surprised that few of my colleagues working with traumatized patients appear aware of this extraordinarily important symptom, one that in my experience has a major impact, not just on the course of the disorder, but on the course of therapy. One reason may be that, unlike visual flashbacks, voice hearing is not typically confined to replaying aspects of a specific traumatic event but generalizes to many everyday situations. As such there is no protocol for treating them within standard therapies for PTSD. On the other hand, voice hearing is strongly related to other, well-recognized aspects of PTSD, such as reporting dissociative reactions during the traumatic event itself, supporting its likely dissociative nature.

Another symptom commonly thought of as psychotic is the presence of delusions. If anything, these have garnered even less attention in the mainstream PTSD literature than hallucinations. But clinicians working with survivors of chronic abuse, whether in childhood or adulthood, are familiar with their patients reporting a powerful delusional sense that the perpetrator is present in the room with them, or continues to control them, even if that person lives far away or is in fact dead. There are two other types of traumatic event that are particularly likely to be accompanied by delusional beliefs. One is being treated in intensive care, an experience frequently followed by adverse emotional consequences (Wade et al., 2012). The combination of threat to life, invasive medical procedures, and the use of powerful drugs has the effect that patients not infrequently experience terrifying hallucinations and delusions, for example that staff are going to abduct and torture them. These then form the content of the later flashbacks and intrusive memories that are experienced as part of the PTSD episode (Wade et al., 2015).

Delusions are also common in the context of psychosis-related PTSD (PR-PTSD; Fornells-Ambrojo, Gracie, Hardy, & Brewin, 2016). PR-PTSD is defined as arising either from external events that may be connected with psychosis (forcible injection, involuntary hospitalization, etc.) or from internal events such as hallucinations or delusions that others are seeking to harm or kill you. Whereas the external events would often qualify as traumatic according to PTSD Criterion A of the DSM-5 (American Psychiatric Association, 2013), when perceptions of one's life being in danger or of being threatened with severe injury are hallucinatory or delusional in nature, these experiences are not considered 'traumatic'. It has therefore been proposed (Fornells-Ambrojo et al., 2016) that *distorted reality* PTSD should be considered as a potential subtype for a revision of DSM-5 PTSD that applies when Criterion A's implicit assumption that individuals are rationally able to appraise severe threat is violated. This subtype is not just relevant to people with psychosis but to individuals whose mental state is impaired through other causes, such as intensive care treatment or dementia. Inspired by this new edition of *Psychosis, Trauma and Dissociation*, it is time to recognize the more complex realities that are described by our patients, and to ensure that we as researchers and clinicians have a set of conceptual tools that do justice to people's lived experience.

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Foreword from the Psychosis Field

Brian Martindale

Every now and again a book comes along that leaves one with the feeling that one's understanding of, and approach to, particular human problems will never be the same. As someone deeply involved for many years in psychological approaches to psychosis, this is one such book. It addresses many essential contemporary clinical and research aspects of psychosis (and disturbances that are related) of which I will list just a few: the role of both childhood and later trauma to vulnerability for, and precipitation of, psychosis; the many possible roles of dissociation; the differentiation of dissociative psychotic conditions from non-dissociative ones; and the interaction between nature (brain) and nurture (trauma) in the genesis of dissociative and psychotic conditions. It also emphasizes limitations to the concept of 'diagnosis' and the need for it always to be considered within cultural, power, and historical contexts.

The second edition of this excellent book supports a shift in the understanding of particular manifestations of severe mental distress, especially what is called 'psychosis' and 'schizophrenia', from an exclusive emphasis on biology, without denying its relevance (in that the psyche is embedded in the soma of the brain), to a recognition of the importance of including the unique histories of individuals and the way they have responded to adversities. The core of this book is the important role of dissociation as a frequent process and outcome following trauma and severe stress; in this way, it revisits the understandings of psychosis at the times of Janet, Bleuler, and Freud. This book supports the resonant but simple crystal metaphor of Freud (1933) in relation to trauma:

> If we throw a crystal to the floor, it breaks; but not into haphazard pieces. It comes apart along its lines of cleavage into fragments whose boundaries, though they were invisible, were predetermined by the crystal's structure. Mental patients are split and broken structures of the same kind (p. 59).

Indeed, by its support for an integration of dissociation into contemporary psychosis discourse, this book might function in a similarly dramatic way to that of Charcot in the nineteenth century who, by pointing out parallels between hypnosis and hysteria, facilitated the acceptance of both (along with hysterical/traumatic psychosis) by the official psychiatry of his time (see Chapter 2).

The tectonic plates are certainly shifting in the psychosis field, and this book will no doubt contribute at a time when there are calls from the United Nations Special Rapporteur to the

Human Rights Council (himself a Professor of Psychiatry) for a targeting of social determinants and an abandonment of the predominant medical model of psychosis (UNDOC, 2017).

In my opinion, all mental health professionals need to be aware of the histories of our disciplines. It is in this way that we are particularly likely to be helped to remain humble in our attitude to contemporary 'beliefs' and to see them as likely to be transient. Understanding history will enhance the role of 'Negative Capability' – a term originally used by the poet John Keats, but elaborated by Wilfred Bion, to mean the ability to tolerate the pain and confusion of not knowing rather than imposing perceived certainties on an ambiguous situation (Williams, 2009). In my view, a lack of appreciation of history has contributed to reductionistic 'beliefs' as to the cause of 'schizophrenia'.

Negative Capability would help us to reflect on our ideas and be able to better listen to what patients have to tell us, instead of listening mainly for what people appear to have in common with one another; it would also help us to place greater emphasis on individual formulations than diagnoses, as the limitations of mental health diagnoses are increasingly recognized (Johnstone, 2015).

A further related reason for the 'shifting tectonic plates' is the growth and power of 'user' movements, representing many persons who are disenchanted if not traumatized by contemporary mental health services. One of the most important of these is the International Hearing Voices Movement (addressed in Chapter 24), which arose from the work of Romme and Escher in Maastricht; this movement emphasizes that voices are frequently based on traumatic experiences from which they had become dissociated. 'Users' and family members are becoming increasingly important members of national clinical practice guidance groups and the experiences they represent are playing an important part in changing practices in psychosis.

In human terms, this book is disturbing because time and time again the research indicates that, in significant numbers of patients, an underlying dissociative disorder is not being recognized. Because of this oversight, patients are not receiving therapeutic interventions that focus on dissociation, even though they are increasingly shown to be effective. Although no longer likely to be cast into asylums for decades, many wrongly diagnosed patients will be needlessly left with long-lasting disability and suffering resulting from treatment with long-term medication that does not benefit them.

Treatment approaches that do appear to impact psychosis, documented in this book, include not only insight-orientated therapies but also trauma therapies such as Eye Movement Desensitization and Reprocessing (EMDR). The growing interest in EMDR and evidence for its effectiveness in psychosis has revealed the relevance of traumatic memories to distressing 'psychotic' symptoms; surely a field for rapprochement between psychoanalysis and EMDR.

One important clinical implication of this book is in the area of early intervention in psychosis (EIP). With the increasing emphasis on EIP, it is vital that EIP teams have expert clinicians in the early recognition and therapy of dissociation, and that all members are familiar with the concepts and research findings and consequent clinical implications outlined in this book. It is equally important that patients who are then recognized as experiencing psychotic symptoms due to dissociation do not get excluded from psychosis services. Chapter 20 by Ross is excellent at extolling a way forward for contemporary services to adopt the important findings outlined in this book.

Andrew Moskowitz, Martin Dorahy, and Ingo Schäfer are to be congratulated on this well-edited multi-authored book, which will be of great interest and importance to all open-minded clinicians and researchers in the field of psychosis and those closely related human difficulties. The authors also point to areas where further research is needed. From reading this book, my sense is that areas particularly needing research are: (i) those patients experiencing psychosis in whom the primary manifestation of their difficulties is in disengaging from relationships (so-called negative symptoms) and to see how much of this phenomenon can be understood within a broad dissociative framework rather than from a purely biological perspective and (ii) other patients with psychosis who do not seem to fit into the dissociative framework presented in this book. Could it be that the latter patients have transformed their problems by unconscious mechanisms (primary processes) into phenomena that disguise their traumas so that they cannot be easily recognized for what they are? In other words, will research show that forms of dissociation are at the heart of far more psychosis than even this book dare presume?

But there is one thing of which I am certain – the field is so ready for further important clinically related research in this area that a third edition will undoubtedly be called for!

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Introduction

Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer

The first edition of this book was published in 2008, one hundred years after the Swiss physician Eugen Bleuler created the term *Schizophrenia* to describe the most disturbed of his psychiatric patients. That anniversary was acknowledged in the introduction to the first edition, and its significance – including the central role of dissociation in the concept – was discussed. Now, as we write this 10 years later, in 2018, we face another 100-year anniversary, the centennial of the end of World War I. This anniversary is important because, during WWI, it became abundantly clear that – under certain circumstances – even the most valiant and courageous of men could become traumatized and manifest symptoms of post-traumatic stress disorder or, as it was called then, hysteria.

> One of the many casualties of the war's devastation was the illusion of manly honor and glory in battle. Under conditions of unremitting exposure to the horrors of trench warfare, men began to break down in shocking numbers. Confined and rendered helpless, subjected to constant threat of annihilation, and forced to witness the mutilation and death of their comrades without any hope of reprieve, many soldiers began to act like hysterical women. They screamed and wept uncontrollably. They froze and could not move. They became mute and unresponsive. They lost their memory and capacity to feel. The number of psychiatric casualties was so great that hospitals had to be hastily requisitioned to house them. According to one estimate, mental breakdowns represented 40 percent of British battle casualties (Herman, 1992, p. 21).

At the time, most physicians viewed these *hysterical disorders of warfare* as the result of cowardice and prescribed punitive treatments such as humiliation and electric shocks. Yet some, such as W.H.R. Rivers in Edinburgh, recognized that the overwhelming symptoms of panic, fear, and pain were psychologically based; Rivers treated his patients with compassion and respect, and advocated their writing or speaking about their traumatic experiences, foreshadowing contemporary approaches to trauma (Herman, 1992).

The important role of dissociation in trauma was also recognized in WWI by the British physician and psychologist Charles Myers (who coined the term 'shell shock'

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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before recognizing that the symptoms were not physically caused). Myers described traumatized men manifesting dissociative parts of the personality.

> The recent emotional experiences of the individual have the upper hand and determine his conduct: the normal has been replaced by what we may call the 'emotional' personality. Gradually or suddenly an 'apparently normal' personality usually returns – normal save for the lack of all memory of events directly connected with the shock, normal save for the manifestation of other ('somatic') hysteric disorders indicative of mental dissociation. Now and again there occur alternations of the 'emotional' and the 'apparently normal' personalities, the return of the former being often heralded by severe headache, dizziness or by a hysterical convulsion. On its return, the 'apparently normal' personality may recall, as in a dream, the distressing experiences revived during the temporary intrusion of the 'emotional' personality (Myers, 1940, p. 67).

Myers' seminal insight, that trauma produces a bifurcation of the personality into a part fixated in the traumatizing events and another part which is attempting to function in daily life (but is only *apparently* normal), forms the basis for the influential contemporary theory of structural dissociation of the personality (Van der Hart, Nijenhuis, & Steele, 2006; Chapter 19 in this book).

In the 10 years since the first edition of this book was published, much has changed – as can be seen in the updated chapters to follow. While in 2008 it was largely speculation, there is now extensive evidence documenting a robust relationship between dissociation and auditory verbal hallucinations. Childhood trauma is strongly associated with schizophrenia, and trauma-based psychotherapeutic approaches, such as EMDR, have been demonstrated to help psychosis. In addition to numerous publications in the areas noted above (and others), workshops, trainings, and, most impressively, two international conferences – in Kristiansand, Norway, in 2015 and 2017 – have been mounted on the manifold connections between psychosis, trauma, and dissociation. A third international conference is scheduled in Norway for 2019, because of the success of the previous two. In acknowledgement of the important work in this area, the subtitle for this edition has been changed from '*emerging* perspectives on severe psychopathology' to '*evolving* perspectives on severe psychopathology'.

And yet, an overwhelming bias toward viewing psychosis and schizophrenia as genetic and biological in origin remains. A 2017 lead editorial in the *American Journal of Psychiatry*, the flagship journal of the American Psychiatric Association, was entitled 'Psychosis beyond the 22q11.2 deletion: Do additional genetic factors play a role?'. This editorial heralds new research on genetic abnormalities to complement the 22q11.2 deletion (of portions of DNA) which they describe as 'one of the strongest genetic risk factors for schizophrenia' (Goes & Sawa, 2017, p. 1027), despite acknowledging that this copy number deletion was also associated with numerous immunological, endocrine, and cranio-facial abnormalities. A few sentences later, the authors reveal that this position is based on the 22q11.2 deletion being found in '0.3% of cases with schizophrenia and almost no control subjects' (p. 1027). In other words, 3 out of 1000 persons diagnosed with schizophrenia have this abnormality, and 997 do not!

At the same time, there are environmental explanations for even this weak genetic finding in schizophrenia. As Fosse, Joseph, and Jones (2016) note:

> (O)ver 180 clinical features … affecting virtually every organ and system have been associated with 22q11.2 deletion syndrome … These alterations, in turn, frequently result in enduring social exclusion, defeat, and infantilizing institutional care, and very likely an increased risk of sexual and physical abuse during childhood and adolescence … Thus, it is possible that the association between schizophrenia and CNVs [copy number variations, such as the 22q11.2 deletion] is an entirely indirect consequence of these extraordinary and often crushing challenges to psychosocial development.

Even so, biologically oriented researchers and clinicians remain intent on interpreting such findings as demonstrating direct genetic links, not considering the possibility of powerful environmental influences that might explain at least part of the relationship. Such a blind adherence to the established paradigm makes it clear that a book such as this one is still needed.

In planning for the second edition of the book, it became apparent that certain changes were needed. While the basic organization from the first edition was retained, the titles of the three parts were simplified and renamed. They are now called: I - Historical and Conceptual Perspectives, II - Research Perspectives, and III - Clinical Perspectives – on the relation between psychosis, trauma, and dissociation. The omission of certain important topics was noted by careful readers of the first edition – most notably, an opening chapter considering the meaning of the terms 'dissociation', 'trauma', and 'psychosis'. In addition, it was clear that some topics relevant for differential diagnoses and/or understanding had been overlooked in the first edition – such as hypnosis, psychological testing/assessment, and the evidence for psychotic symptoms in PTSD. In order to make room for the new chapters, a few chapters from the first edition were not retained. While this was not an easy decision, as each of those chapters made a valuable contribution to the field and still offer relevant insights, it allowed for the second edition to be clearly demarcated from the first.

On the broadest level, the overarching goal for the second edition of this book remains the same as it was for the first edition – to foster communication and dialogue between the fields of trauma/dissociation and psychosis/schizophrenia. As is clear from the 22q11.2 deletion syndrome example discussed above, these fields have traditionally endorsed polar opposite positions on aetiology and treatment, informed by genetics and neurochemistry on one side and adverse environment research on the other. The specific goals for the book remain: (i) to apply knowledge gained from the trauma/dissociation field, including that of post-traumatic and dissociative disorders, to an understanding of psychosis, psychotic symptoms, and schizophrenia, and (ii) to compare and contrast post-traumatic and dissociative disorders with psychotic disorders, from a wide range of perspectives. In the process, the second edition includes important research and clinical insights secured within the past decade.

The first part of the book, on historical and conceptual perspectives (Chapters 1–8), opens with a new chapter on the concepts of *psychosis*, *trauma*, and *dissociation*. This chapter traces the history of these concepts, explores different contemporary conceptions of the terms, and proposes ways in which they should be used to maximize validity and

utility. In addition to the first editor, the chapter authors come from the dissociation field (Onno van der Hart) and psychosis field (Markus Heinimaa), continuing the *cross-fertilization* tradition established in the first edition. The next two chapters, on historical conceptions of dissociative and psychotic disorders, with an emphasis on the nineteenth and early twentieth century (Middleton, Dorahy, and Moskowitz), and the historical diagnosis *hysterical psychosis*, including its relation to the twentieth century diagnosis *reactive psychosis* (Witztum and Van der Hart), were updated and revised from the first edition. *The role of dissociation in the historical concept of schizophrenia* (Chapter 4, Moskowitz and Heim) is substantially revised from the first edition. The new chapter focuses less than did the first edition chapter on historical events involving Freud, Jung, and Bleuler, and more on the ideas behind Bleuler's conception of schizophrenia. In addition, a new section on Kurt Schneider's first-rank symptoms of schizophrenia and their relation to dissociation makes up the second half of the chapter. Next comes the late Christian Scharfetter's chapter on self-disturbances in schizophrenia and their relation to dissociation, which is retained unchanged from the first edition. Chapters 6 and 7, on borderline personality disorder's relation to dissociation and psychosis from a historical perspective (Howell), and on attachment perspectives on the development of schizophrenia (Gumley and Liotti), were updated and revised from the first edition, with the latter chapter emphasizing affect regulation disturbances. Finally, the first part of the book ends with a wide-ranging chapter on delusions, trauma, and memory (Moskowitz and Montirosso), substantially revised from the first edition. In this chapter, the argument is made that some delusions may have their genesis in early distressing attachment or relationally based experiences, and that the forms of communication disturbance associated with these experiences bears some resemblance to those described in the double bind theory of schizophrenia.

The second part of the book looks at research perspectives on the relation between psychosis, trauma and dissociation (Chapters 9–18). Chapters 9, 11, and 12, on childhood trauma in psychotic and dissociative disorders (Scott, Ross, Dorahy, Read, and Schäfer), dissociative symptoms and co-morbid dissociative disorders in schizophrenia spectrum disorders (Schäfer, Aderhold, Freyberger, Spitzer, and Schroeder), and psychotic symptoms in severe dissociative disorders (Şar and Öztürk), respectively, were all updated from the first edition. Chapter 10 is a new chapter and looks at structural brain imaging findings in psychotic and dissociative disorders and after childhood trauma (Fosse, Moskowitz, Shannon, and Mulholland). Intriguing differences are highlighted, and it is argued that many brain changes seen in these disorders may be a consequence of early adversity. Next comes two new chapters, Chapter 13 on auditory verbal hallucinations (Longden, Moskowitz, Dorahy, and Perona-Garcelán) and Chapter 14 on hypnotizability in dissociative and psychotic disorders (Mertens and Vermetten). In Chapter 13, the prevalence and characteristics of auditory verbal hallucinations, or voice hearing, are reviewed in psychotic, post-traumatic, and dissociative disorders, and are compared to voice hearing in persons without a psychiatric diagnosis. The extensive evidence for a role for dissociation in voice hearing is summarized, and its connection to a view of the mind as 'dialogically based' is proposed. In Chapter 14, the concept of hypnotizability is reviewed, in relation to *dissociation*, *absorption*, and *suggestibility*, and approaches to its assessment are discussed. Hypnotizability's possible utility for the differential diagnosis between psychotic and dissociative disorders, albeit on the basis of limited research studies, is considered, and avenues for future research spelled out.

Chapter 15, a comparison of depersonalization disorder and schizotypal personality disorder from phenomenological, cognitive, and neurobiological perspectives (Hamilton and Simeon), and Chapter 18, a comparison from a cognitive empirical perspective on the response to threat in psychotic and dissociative disorders (Dorahy and Green), are updated and revised from the first edition. Two new chapters, Chapter 16, on the growing evidence for a form of PTSD with psychotic features (Armour, Shevlin, Elklit, and Houston), and Chapter 17, a comparison of working and autobiographical memory disturbances in schizophrenia and PTSD (Galletly and McFarlane), round out the second part of the book.

The final part of the book considers clinical perspectives on the relation between psychosis, trauma and dissociation (Chapters 19–27). Chapters 19 and 20, updated from the first edition, consider proposals for two different hybrid dissociation/psychosis disorders and their treatment: dissociative *psychosis* and its relation to the theory of structural dissociation of the personality (Chapter 19, Van der Hart and Witztum) and dissociative *schizophrenia*, the notion that a form of schizophrenia, characterized by prominent auditory hallucinations and extensive childhood trauma, is dissociation based (Chapter 20, Ross). Chapter 21 (Steinberg), also updated from the first edition, looks at approaches to the differential diagnosis of dissociative and psychotic disorders, with emphasis on structured diagnostic interviews. There are two new chapters in the third part of the book, on psychological testing for differential diagnosis (Chapter 22, Brand, Spindler, and Cannon) and the use of the trauma therapy EMDR (Eye Movement Desensitization and Reprocessing) to treat psychotic disorders (Chapter 25, Gonzales, Mosquera, and Leeds). Chapter 22, on psychological testing, reviews scoring patterns for persons with psychotic and dissociative disorders on tests assessing cognitive abilities, personality attributes, and trauma-related symptoms. The most dramatic differences are found on projective tests such as the Rorschach Inkblots, and the authors make recommendations for assessment and differential diagnosis. Chapter 25, on EMDR, offers a brief overview of EMDR treatment, reviews the research supporting EMDR's use with psychotic disorders, and presents a series of case studies illustrating how EMDR may be used to treat psychosis. The remaining four chapters are updated from the first edition. Chapter 23 (Blizard), on borderline personality disorder and relational trauma, considers the effects of caregiver pathology on reality testing, and argues for a relationally based approach to clinical treatment, illustrated by a variety of vignettes. Chapter 24 (Corstens, Escher, Romme, and Longden) is an update and revision of the chapter on the Maastricht approach to working with persons who hear voices, emphasizing the meaning behind the voices and changing the person's relationship to their voices. Chapter 26 (Sinason and Silver), on psychodynamic approaches to working with dissociative and psychotic disorders, illustrated by vivid case studies, is updated from the first edition. Finally, Chapter 27 (Randal, Geekie, Lambrecht, and Taitimu), revised and updated from the first edition, explores the relation between psychosis, dissociation, and spirituality in a variety of cultures and from a variety of perspectives. It emphasizes the great importance of taking the person's own interpretation of their experiences into account.

Taken as a whole, these new and revised chapters cover an extensive range of the possible perspectives on the complex relationship between psychosis, trauma, and dissociation. We hope that readers will be stimulated to develop and expand on these ideas in a number of directions, so that some of the many remaining questions and problems in the field can be successfully addressed.

As Judith Herman notes in the opening pages of her groundbreaking book *Trauma and Recovery*, accepting and facing the reality of trauma, and the role it plays in many disturbances, is deeply challenging not only on a societal level, but also on a personal one.

> To study psychological trauma is to come face to face both with human vulnerability in the natural world and with the capacity for evil in human nature. To study psychological trauma means bearing witness to horrible events … (W)hen the traumatic events are of human design, those who bear witness are caught in the conflict between victim and perpetrator … It is very tempting to take the side of the perpetrator. All the perpetrator asks is that the bystander do nothing … The victim, on the contrary, asks the bystander to share the burden of pain. The victim demands action, engagement, and remembering (Herman, 1992, pp. 7–8).

Now, even more so than in 2008, it would be easy to be distracted by technological advances to assessment and treatment, particularly those focusing on the brain; these developments tend to absolve individuals and societies of moral and personal responsibility – implying that psychiatric symptoms were 'no one's fault'. But if psychiatric symptoms *are* meaningfully connected to someone's life experiences, then it is unethical (and unscientific) to neglect to ask the simple question – what happened to this person? The answers, while often cloaked in shadows, may not only inform our understandings of trauma, dissociation, and psychosis, but also their treatment and prevention.

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Part I

Historical and Conceptual Perspectives

1

Defining Psychosis, Trauma, and Dissociation

Historical and Contemporary Conceptions

Andrew Moskowitz, Markus Heinimaa, and Onno van der Hart

Prior to considering the range of potential relationships between trauma, dissociation, and psychosis, to which the rest of this book is dedicated, it is important to spend some time considering how these terms have been used over time, and the advantages and disadvantages of each. In this chapter, we review the etymology and historical uses of the terms *psychosis*, *trauma*, and *dissociation*, emphasizing current popular uses. Each term has been used in a range of ways, some more problematic than others. While only limited effort has been expended in defining *trauma* in recent years, and hardly any effort has been expended for *psychosis,* the definition of *dissociation* has received considerable attention in the literature, with a number of different definitions proposed (see Dell & O'Neil, 2009 and Nijenhuis & Van der Hart, 2011, for extended discussion of this issue). Following an overview of current uses of these terms, we present our recommendations as to how they might be most usefully employed. The authors of other chapters in this book are not bound by our recommendations, but the following discussion should allow the reader to carefully consider the use of these concepts throughout this volume and elsewhere.

Consideration of the meaning of the terms *psychosis*, *trauma*, and *dissociation* illuminates several tensions. The most prominent involves the relation between the person and the world, including other individuals. The question is whether any of our terms of interest can be adequately defined by reference to *only* the person or *only* the world. For example, the disturbances seen as part of *psychosis*, such as *delusions*, have long been considered to reside in the individual. However, we will consider here whether the concept *psychosis* can really be used without reference to other persons. Likewise, *trauma* is increasingly being seen as a specific event or events to which an individual is exposed, but attempting to locate the meaning of this term in the 'outside world' without reference to an individual's *interpretation* of the specific spatiotemporal context, appears fraught with difficulty (Nijenhuis, 2017). A second, related, tension involves the grounding of these concepts in real life experiences. By definition, *trauma* requires exposure to a challenging event, which is central to its meaning. In contrast, *psychosis* has often been seen as behaviour or language that fundamentally cannot be understood – is

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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incomprehensible. But if psychotic symptoms, such as delusions, actually arise from challenging life events in ways that *can* be understood, does that then make them *not* psychotic? These issues will be explored below.

Psychosis

Etymology and Historical Conceptions

Severe forms of psychological and behavioural dysfunction have been recognized since ancient times, leading to the development of concepts such as 'insanity', 'mania', and 'dementia'. The term 'psychosis' was introduced as an alternative term in the mid-nineteenth century by the Austrian physician Ernst von Feuchtersleben (Beer, 1995). In his 1845 book (von Feuchtersleben, 1845) *Lehrbuch der Ärztlichen Seelenkunde* (translated into English as *The Principles of Medical Psychology*), von Feuchtersleben used the term 'psychosis' – derived from the Greek 'psyche' for 'mind or soul' (literally, '*animating spirit*'), followed by the Latin suffix '-osis' for 'abnormal condition' – to refer to an ailment where both the body *and* the soul were sick (i.e. a disease that affected 'the whole person'). His coinage was a response to the early nineteenth-century debate in German psychiatry between *Psychiker* and *Somatiker* – those who located mental disease in the 'soul' and those who located it in the 'body'. Feuchtersleben's new term was an attempt to mediate between these two groups and reconcile their opposing views.

Late nineteenth-century and early twentieth-century nosologies largely shared this conception of *personhood* as the primary locus of psychoticism (and schizophrenia). For Kraepelin, for instance, Dementia Praecox involved a 'destruction of personality' (Berrios & Hauser, 1988) and Bleuler (1949) maintained that

> A schizophrenic … is not … a sick personality due to alterations in single psychological functions. Quite to the contrary, we notice in him single altered functions because his personality as a whole is sick (p. 288).

As the twentieth century developed, two divergent major trends could be recognized. In Europe, and particularly England, Kraepelin's narrow concept of schizophrenia/dementia praecox held the day, but in the United States a much broader conception was in use. The latter was influenced by Bleuler's notion of disturbed associative processes as central to schizophrenia and Freud's view of psychosis as a defect in 'reality testing'. These conceptions were common in settings where psychodynamic thinking was dominant, such as the psychiatric community in the United States in the mid-twentieth century (Andreasen, 1989). Here, the boundaries of the concepts *schizophrenia* and *psychotic* were wide, with 'borderlines states' argued to manifest 'reality distortion' in subtle ways.

These conceptions figured heavily in the first American classificatory systems, the first edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-I, APA, 1952) and the DSM-II (APA, 1968); the latter added the condition that psychosis had to 'interfere grossly with an individual's capacity to meet the ordinary demands of life' (APA, 1980, p. 368). By the late twentieth century, the corresponding

international diagnostic system, the International Classification of Diseases (ICD), was defining psychosis in a similar way. For example, the ICD-9 (WHO, 1977) defined 'psychoses' as mental disorders in which 'impairment of mental function has developed to a degree that interferes grossly with insight, ability to meet some ordinary demands of life or to maintain adequate contact with reality' (p. 410). Level of functioning, however, was not emphasized in the DSM-III (APA, 1980) or DSM-III-R's (APA, 1987) definitions of 'psychosis', perhaps because the revised diagnosis of *schizophrenia* now required evidence that current level of functioning was 'markedly below' previous levels. The DSM-III defined 'psychotic' as a 'gross impairment in reality testing' (APA, 1980, p. 367) while the DSM-III-R added '… and the creation of a new reality'[1] (APA, 1987, p. 404). The presence of specific psychotic symptoms was considered 'direct evidence' of psychosis.

Current Conceptions

In the DSM-IV (APA, 1994), DSM-5 (APA, 2013), and the ICD-10 (WHO, 1992), the trend to emphasize psychotic symptoms in the conception of psychosis reached its apex. Here, psychosis is simply *defined* as the presence of certain psychotic symptoms. This is most clearly stated in the ICD-10 (WHO, 1992).

> 'Psychotic' has been retained as a convenient descriptive term …. Its use does not involve assumptions about psychodynamic mechanisms, but simply indicates the presence of hallucinations, delusions, or a limited number of severe abnormalities of behaviour, such as gross excitement and overactivity, marked psychomotor retardation, and catatonic behaviour (pp. 3–4).

Likewise, in the DSM-IV (APA, 1994), *psychosis* is defined by reference to the psychotic (or 'positive') symptoms of schizophrenia, with three versions (from narrow to broad): (i) delusions and hallucinations (experienced without 'insight'), (ii) delusions and hallucinations (with or without insight), and (iii) delusions, hallucinations, and disorganized speech or behaviour (Rudnick, 1997). 'Psychosis' is not even defined in the DSM-5 (APA, 2013), but 'psychotic *features*' are defined as delusions, hallucinations, and formal thought disorder (p. 827). Finally, the proposed ICD-11 (beta-draft) emphasizes, in addition to the psychotic/positive symptoms listed above, the first-rank symptoms of experiences of passivity and control ('the experience that one's feelings, impulses, or thoughts are under the control of an external force'; WHO, n.d.), by listing these as psychotic experiences separate from delusions (in the DSM-IV and DSM-5, such experiences are simply considered examples of 'bizarre' delusions).[2]

These changes reflect increasing concern in the psychiatric community over the last half century with the *reliability* of psychiatric terms, after research evidence revealed, for example, that the diagnosis of schizophrenia was being applied very differently by UK and US psychiatrists (Kendell et al., 1971). This emphasis on reliability and the consequent attempt to operationalize the definition of psychosis has led to an entirely circular definition; that is, being 'psychotic' now means 'having psychotic symptoms'. As such, 'psychosis' has simply become shorthand for specific psychotic symptoms such as delusions or hallucinations. This use of 'psychosis' adds little to the meaning of these terms, and is lacking in utility or validity.

While the official definition of the term psychosis is a tautological one, it is clear that the concept is used in a different way clinically. Heinimaa (2008) looked at the use of the words 'psychosis' and 'psychotic' in psychiatric practice, and concluded that these terms (along with psychotic symptoms such as 'delusions') relate to the concept of 'incomprehensibility'. This view in itself is not new, as Jaspers (1913/1963) argued more than a century ago that 'genuine' (in German, 'echte') psychotic delusions were 'psychologically irreducible' or 'not understandable' (p. 96). Heinimaa goes beyond Jaspers, however, in insisting that the concept of psychosis cannot be understood without recourse to the political and social context of diagnosis and treatment: '"Incomprehensibility", and consequently "psychosis", are *relational* concepts, and any attempt to read these relational events into individuals is doomed to fail' (Heinimaa, 2008, p. 50). Elsewhere, he notes that these terms are meaningless outside of their interpersonal context: 'Saying that something is incomprehensible is not an explanation at all, but just an expression of despair when our ordinary ways of comprehending people and situations elude us' (Heinimaa, 2003, p. 227).

In other words, the term psychosis is utilized by 'authorized' individuals when the speech or behaviour of a person under consideration cannot be understood (and when the observer has no simple explanation for their lack of understanding – e.g. believing the person is speaking a foreign language). To illustrate, the DSM-5 offers as psychotic symptoms '*grossly disorganized*' behaviour or '*disorganized*' speech. But what do these terms mean? Is the behaviour or speech *lacking* organization or does the observer/interviewer simply not *recognize* what that organization is? To put it differently, how can we determine that a symptom is unconnected with a person's life experiences if we are ignorant of their history or if they are unable (or unwilling) to make the connection for us? As is discussed in later chapters of this book (particularly Chapters 12 and 16), if someone is experiencing a flashback to a traumatizing experience while the observer is unaware of this (or if they are unaware themselves), their behaviour will most likely be labelled 'disorganized' and deemed to be psychotic.

Importantly, the term 'psychosis' (as well as 'delusional' and 'hallucinations') is often qualified by appending a prefix ('*quasi*-psychotic') or suffix ('psychotic-*like*') in situations where an apparent connection to an individual's life experiences *can* be made, making the content of the symptom seem *understandable* (Brewin & Patel, 2010). Under these circumstances, clinicians or researchers are often hesitant to use the term *psychosis* (an observation which supports the argument for its conceptual connection with 'incomprehensibility'). An analysis of the use of the term *pseudo-hallucinations* (Berrios & Dening, 1996) comes to a similar conclusion. Berrios and Dening (1996) describe pseudo-hallucinations as a 'joker' in a 'diagnostic game', which allows clinicians to 'call into question the genuineness of some true hallucinatory experiences that do not fit into a pre-conceived psychiatric diagnosis' (p. 761).

There is one final consideration. While this is rarely elaborated, in practice *psychosis* almost always is used to describe a *change* in a person's behaviour. Someone who was previously understandable has now become 'un-understandable'. The historical fact that psychosis meant a malady of the whole person leads to the recognition that the concept of psychosis cannot be understood without reference to the surroundings, the social world, and the world at large. As Parnas (1999) notes, echoing Freud (1924), 'From a phenomenological point of view, a fully developed psychotic syndrome signifies the emergence of a new organisational unity where a new order of meaningfulness has replaced the old one' (p. 27).

Proposed Conception

The current official meaning of the term 'psychosis' – having 'psychotic' symptoms – is clearly unhelpful to clinicians or researchers. And while our understanding of how 'psychosis' is used in practice – in an inherently interpersonal way to indicate non-comprehension – is no doubt accurate, such a formulation has limited utility. A lack of comprehension between persons can arise from a number of sources, and limiting the definition to this social contextual perspective would require us to refrain from using 'psychosis' whenever an explanation for a person's behaviour can be found. This does not seem to be ideal.

But how do we address the intertwining issues of self, meaning, and world in looking for a valid and more useful concept of psychosis? We can begin by going back to the original conception of 'psychosis', as an 'illness' of the whole person, adding that it occurs in the context of other relationships and the broader world. Acknowledging the validity of this historical interpretation, one way forward might be through an exploration of the concept of 'reality', as used in definitions of psychosis. Commonly used expressions include 'reality testing' or 'loss of contact with reality'. As usually interpreted, these expressions imply that reality is 'out side of the self' and can be 'tested' more or less accurately, or that one can maintain or lose contact with it. Such a positivistic view of the world is not compatible with contemporary constructivist philosophies – the recognition that the person and the world cannot so easily be dichotomized (Damasio, 1994), or that even such fundamental functions as perception are inherently relational. Janet, for example, insisted that perception is driven by the potential for action – we see what we are capable of acting on or responding to at the most basic level (Janet, 1935). Others have recognized this and spoken of a 'perception-motor action cycle' (Hurley, 1998).

So, if reality is not 'out there' to be assessed more or less accurately by us 'in here', how do we arrive at consensual views of 'reality' (i.e. how do we share meaning with others about the world)? In Chapter 23 of this book, Blizard offers this proposal for how reality testing (or what we would prefer to call 'reality *validation*') develops:

> From a developmental standpoint, the first modality is sensory cross validation: 'If I see it, can I touch, hear, smell, or taste it?' Next comes consensual validation: 'Did you see (hear, feel) what I saw?' Cognitive validation can take place internally, although it usually needs to be reinforced consensually: 'Did this event make sense, fit within my, your, or society's understanding of what is possible?' … Beyond simple, sensory cross validation, the capacity for reality testing depends on interaction with others. When the child's primary caregivers have circumscribed methods of reality testing or pervasively distorted perceptions of others, the child's basis for interpreting people will be similarly skewed …
>
> Familial denial of experiences, such as, 'That doesn't hurt', 'Your father would never do a thing like that', or 'That didn't happen, you just imagined it', may cause a child to doubt her own experience and accept the consensual [i.e. familial] version of reality.[3]

A potential useful heuristic model for applying these ideas to the concept of reality (and hence to 'psychosis') comes from Pierre Janet. Janet argued that humans ascribe a level of reality to internal or external events that could be conceptualized in terms of a

hierarchy. He included on this hierarchy various concepts, including thoughts, imagination, actions, and various states of the past, present, and future (Janet, 1928). The immediate future and recent past are usually accorded high levels of reality, and thoughts and ideas are usually accorded low levels. The highest level of the reality function (*la fonction du réel)* involves what Janet called *presentification*, the capacity to act in a fully focused and meaningful way in the present, integrating one's past experiences and future plans (discussed at length in Van der Hart, Nijenhuis, & Steele, 2006). Mental health requires presentification to be (usually) accorded the highest level of reality, so we can act in the present and effectively adapt with required action.[4] Anything that *weakens* the experienced reality of the present (e.g. chronic childhood invalidation of the reality of traumatizing experiences), or *strengthens* the experienced reality of thoughts or imagination (e.g. schizoid tendencies or schizotypal personality), could lead to psychological or functional impairment. Indeed, Janet argued that much of psychopathology could be conceptualized as a *mixing up* of levels of reality – for example, viewing the distant past as happening in the present, as occurs in post-traumatic disorders.

Janet's ideas can be usefully applied to the concept of psychosis. Psychosis could be conceptualized as occurring when internal experiences such as thoughts or imagination are accorded as much or more reality than the current moment. To clarify this notion, here is an illustration contrasting permutations of levels of reality arising from delusions, with milder and more transient aberrations.

A person living in city A has applied for a new job in city B, 500 kilometres away. After he applied for the position, but before hearing whether or not he was to be interviewed, he saw on a television program that one of City A's prominent sports teams had agreed to move to city B, an unusual event. The person might reflect on this and say to himself, not entirely seriously, 'That's interesting, I wonder if that might be a "sign" that I will get the job?' Many well-functioning people would not do this at all, and those who did (indulging in what we might call 'magical thinking'), would drop the thought fairly quickly and certainly not act on it in any way. Such a fleeting consideration would involve a transient increase in reality of a wished-for future.

In contrast, a person who was delusional might see that same TV story and decide that it meant not only that he was *going* to be offered the job, but that he had *already* been offered the job – but just not been notified in the usual way (perhaps because his mail had been stolen). Indeed, he might believe that the news story was specifically *meant* to give him that information (a delusion of reference). Further, he might be so convinced of the reality of this that he would leave his job in city A, move to city B, and arrive at the workplace where he had applied for a job, saying, 'When do I start?'

This is, of course, a highly simplified and somewhat unrealistic example (for example, delusions are often *not* acted on), but it does illustrate how Janet's 'hierarchy of reality' can inform our understanding of psychosis. It has the additional advantage of not excluding bizarre-seeming behaviour that *can* be linked back to a person's life. And it illustrates our position that psychotic experiences, such as delusions, may not be, in essence, different from the hopes and fears of all of us – they are only accorded a stronger level of reality and hence are more likely to drive actions.

Thus, we would argue that a useful adjunct to understanding the concept of *psychosis* as *relationally-based* would include both of the following: (i) the recognition that a considerable and relatively stable permutation in the 'hierarchy of reality' has occurred and (ii) that the person as a whole has been changed in a fundamental way – that their entire conception of themselves, other people, and the world has been transformed.

Trauma

Etymology and Historical Conceptions

For more than three centuries, the term *trauma*, derived from the Greek word for 'wound', has been used to describe physical wounds or bodily injuries. It wasn't until the late nineteenth century that trauma was first used to describe *psychological* injuries. According to Van der Hart and Brown (1990), the German neurologist Albert Eulenberg argued in 1878 that the existing concept of 'psychic (psychological) shock', referring to the after-effects of powerful emotions such as terror or anger, was better conceptualized as 'psychic *trauma*'. They note that Eulenberg 'regarded the "sudden action of vehement emotions" as an actual molecular concussion of the brain' comparable to cerebral concussions resulting from physical trauma (Van der Hart & Brown, 1990, p. 1691).

Though Eulenberg believed that overwhelming emotions could directly cause brain injury, most early uses of *psychological* trauma viewed physical injury as only a *metaphor* for psychological injury. But the experience of intense or 'vehement' emotions was central to the concept (Janet, 1889). By the late 1880s, *trauma* was widely used, particularly in the diagnosis of *traumatic neurosis* (introduced by Oppenheim, 1889). For example, Breuer and Freud, in their 1893 'Preliminary Communication on the Psychological Mechanisms of Hysterical Phenomena' (later incorporated into *Studies on Hysteria* (1895/1955), extended the concept of trauma from traumatic neuroses to hysteria:[5]

> In traumatic neuroses, the operative cause of the illness is not the trifling injury but the effect of fright – the psychical trauma. In an analogous manner, our investigations reveal, for many, if not for most, hysterical symptoms, precipitating causes which can only be described as psychical traumas. Any experience which calls up distressing affects – such as those of fright, anxiety, shame, or physical pain – may operate as a trauma of this kind … (p. 5–6).

Clearly, in this early formulation, Breuer and Freud recognize that an event by itself, without taking into account the range of individual reactions, cannot account for the symptoms – since 'any experience' theoretically, could 'operate as a trauma'. They then add, importantly, 'whether or not it does so depends naturally enough on the susceptibility of the person affected' (Breuer & Freud, 1895/1955, p. 6). The relevance of dissociation was also clearly recognized. A few sentences later, Breuer and Freud note, 'We must presume … that the psychical trauma – or more precisely the memory of the trauma – acts like a foreign body which long after its entry must continue to be regarded as an agent that is still at work …' (p. 6).

The first English use of the word *trauma* in a psychological sense came in William James' 1894 review of Breuer and Freud's 1893 'Preliminary Communication'. In his review, James states:

> Hysteria for them starts always with a shock, and is a 'disease of the memory'. Certain reminiscences of the shock fall into the subliminal consciousness, where they can only be discovered in 'hypnoid' states. If left there, they act as permanent 'psychic *traumata*', thorns in the spirit, so to speak. The cure is to draw them out in hypnotism, let them produce all their emotional effects, however violent,

> and *work themselves off*. They make then (apparently) a new connection with the principal consciousness, whose breach is thus restored, and the sufferer gets well (p. 199; italics in original).

Thus, in the late nineteenth century, the concept of psychological trauma and the concept of dissociation were inexorably linked.

Through most of the twentieth century, there was no urgent need to develop the concept of trauma, which was primarily used in the context of traumatic neurosis. However, with the introduction of the diagnostic category *Post-Traumatic Stress Disorder* (PTSD) in the DSM-III (APA, 1980), a precise definition of 'trauma' became more important. As PTSD could only be diagnosed *after* the experience of a 'trauma', the new term '*post*-traumatic' shifted the emphasis from trauma as a *reaction* to an event to trauma as the *event itself*. The definition of 'trauma' determined the potential limits of the PTSD category for the purposes of psychiatric treatment and, frequently, criminal and civil legal liability.

Contemporary Conceptions

From 1980 on, definitions of trauma included in the DSM diagnosis of PTSD (DSM-III to DSM-IV) emphasized exposure to an extreme event precipitating strong emotional reactions. Both of these components were considered important. So, the 1980 DSM-III described trauma as a 'psychologically distressing event that is outside the range of usual human experience' and was experienced with 'intense fear, terror, and/or helplessness'. While there was no attempt to define the type of event, it was stated that the 'precipitating stressor' could *not* be one that was 'usually well tolerated' by other members of one's cultural group.[6]

This definition was changed when it became apparent that symptoms of PTSD could develop in response to experiences that were certainly not 'outside' the range of 'usual human experience', such as domestic violence or rape. Other changes in the DSM-IV (APA, 1994) included describing the types of experiences that would qualify as a trauma, along with specifying the ways in which a person could be exposed to the relevant information. Qualifying events had to involve 'actual or threatened death or serious injury' or 'a threat to the physical integrity of oneself or others'. The person could have actually experienced the danger, witnessed another exposed to danger, or otherwise been 'confronted with' the traumatic event (presumably, for example, by being told of this by a third person). In contrast, the ICD-10 (WHO, 1992) declines to identify specific events, but defines trauma as 'a stressful event or situation of exceptionally threatening or catastrophic nature, which would be likely to cause pervasive distress in almost anyone' (p. 120). In all of these definitions, however, strong emotional reactions or pervasive distress were required components.

This was no longer the case with the publication of the DSM-5 in 2013 (APA, 2013). In a dramatic change to the meaning of the word 'trauma', the DSM-5 authors dropped the 'emotional response' component of the PTSD trauma definition, arguing that it had 'no utility'. In the DSM-5 (APA, 2013), a traumatic event (also referred to as a 'traumatic stressor') is defined as one involving exposure to 'actual or threatened death, serious injury, or sexual violence' that a person him- or herself experienced, witnessed, or heard about (which, in most cases, would have to involve a 'family

member or friend' experiencing a violent or accidental death or risk of death; p. 271). The proposed ICD-11 PTSD criteria defines trauma as 'an extremely threatening or horrific event or series of events, and also does not refer to emotional reactions. A subtle but significant modification is found in the proposed criteria for complex PTSD, however, where it is noted that the event or events are '*experienced as*' extremely threatening or horrific.

Thus, over the past century-and-a-quarter, the definition of trauma has changed dramatically – from its conception as 'any experience' that produces distressing affects, to a description of specific events without reference to any emotional reaction.

Proposed Conception

As noted, the DSM-5 conceptualization of trauma reverses more than a century of tradition, decoupling the term trauma from its metaphorical binding to physical wounds. But is this really a problem?

There are good reasons in the conception of trauma to emphasize the subjective psychological response *over* the external event. For example, Carlson, Smith, and Dalenberg (2013) found that emotional losses, without any suggestion of physical threat or danger, such as the ending of an important relationship or the loss of one's home, could powerfully predict PTSD.

There is also a body of literature dating back two decades exploring persons' emotional responses to psychotic symptoms, such as paranoid delusions or abusive voices. Technically, according to the DSM-5 criteria for PTSD, such experiences would not qualify as a trauma. Nonetheless, researchers have found that psychotic patients meeting PTSD symptom criteria in response to psychotic symptoms were equally as distressed or functionally impaired as psychotic patients meeting PTSD criteria on the basis of a DSM-IV defined 'traumatic event' (Lu et al., 2011). They note that their findings are consistent with a number of other studies, and argue that they raise 'further questions about the scientific validity of the DSM-IV definition of traumatic event' (Lu et al., 2011, p. 73).

We would argue that the solution to this dilemma would be to firmly locate 'trauma' in the individual (as a 'wound'), or between the individual and the world, recognizing that an individual's history and characteristics can raise their risk of being traumatized; events, inherently 'subject-dependent and spatiotemporally embedded' (Nijenhuis, 2017, p. 49), would then be defined, as more or less 'potentially traumatizing'. This is the tack taken by Van der Hart et al. (2006) who review the literature on traumatizing events and conclude:

> Some events have more potential to be traumatizing than others. They include experiences that are intense, sudden, uncontrollable, unpredictable and extremely negative. Events that are interpersonally violent and involve physical harm or threat to life are more likely to be traumatizing than other kinds of highly stressful events such as natural disasters. Events that are not literally life-threatening but which include attachment loss and betrayal by an important attachment person also increase the risk of traumatization (p. 24).

Even though certain events are more likely to be traumatizing, there is considerable variation in how individuals react to these events; if someone successfully deals with an event that others might see as extremely stressful, that event cannot be viewed as

traumatizing for that person (Nijenhuis, 2015). Accordingly, one can conceptualize trauma as an individual's 'breaking-point' when faced with events that are, for him or her, personally overwhelming. As noted by military psychiatrist T. A. Ross (1941), 'All of us have our breaking-point. To some it comes sooner than to others' (p. 66). But a breaking-point, considered as a combination of individual factors and sensitivities to particular stressful events, should not be seen as purely quantitative in nature. The *meaning* of the potentially traumatizing event is always of great importance. As Nijenhuis (2017) notes, 'The meaning of the adverse event for the individual who lives it is necessarily co-dependent on the context of the current environment as well as on the embedded events that preceded it and *are anticipated to follow*' (p. 49). For example, Kilpatrick et al. (1989) describe a patient who did not develop PTSD in the months after she was raped, but only later after discovering that the rapist had previously raped other women, and had killed one of them. She was then forced to reconceptualize the *meaning* of the event as potentially life threatening (the event itself, of course, did not change), and developed PTSD.

Finally, this notion of trauma as a breaking-point highlights the inability to integrate the implications of an event into the existing conceptions of one's self and the world, recapitulating the historical linking of trauma and dissociation. In our opinion, to define trauma exclusively as an 'event' occurring 'in the world', without reference to an individual's inability to make sense of the experience, not only violates the essential historical meaning of the term, but renders it clinically useless – little more than a marker of extreme events.

Physical trauma continues to refer to a reaction to an injury, and we believe that psychological trauma should as well. Accordingly, following Nijenhuis (2015), we would define trauma as a 'biopsychosocial injury related to a particular dynamic and historical configuration of brain, body and environment … (whose) formal cause is a lack of integration of particular experiences/events … (which) manifests itself as a particular dissociation of personality' (p. 271). As such, the concept of trauma is intimately connected with the concept of dissociation, to which we now turn.

Dissociation

Etymology and Historical Conceptions

The term 'dissociation' comes from the Latin 'dis' (or 'apart') and 'sociare' (to 'join together' or 'associate') (OED, 2012). It was first used in the early fifteenth century to mean 'separate from companionship' (and, indeed, is still used this way, though more often as 'dis-associate'). The social use of the term predominated until the mid-nineteenth century, when it was adopted by chemists to describe the mechanism by which heat broke down compound substances into primary elements. Notably, chemists called the temperature at which the breakdown occurred a *dissociation point* – and recognized that it varied from compound to compound. It was only after dissociation was applied in social and chemical realms that it came to be used to describe *psychological* experiences. The earlier social and chemical meanings of dissociation, including the notion of a *dissociation point*, add important layers of meaning to the current psychological use of the term.

In nineteenth-century French psychiatry, dissociation referred to a division or compartmentalization of consciousness or personality – the latter term emphasizing that psychobiological phenomena beyond consciousness were involved. Some other terms in vogue at the time were *doubling of the personality*, *double consciousness*, *division of the personality*, and *psychological disaggregation* (Van der Hart & Dorahy, 2009). Pierre Janet, for example, used both *disaggregation* and *dissociation* interchangeably. Janet viewed dissociation as a major characteristic of the diagnostic category *hysteria* – a broad psychopathological category which today would include various trauma-related disorders, such as PTSD, various somatoform disorders, borderline personality disorder, and dissociative identity disorder. Janet clearly distinguished between *dissociation* and other disturbances of consciousness (i.e. narrowing of the field, or lowering of the level, of consciousness) that have, in recent years, come to be labelled dissociation. He states that 'when one doesn't notice something, doesn't make some associations with it, this is not "dissociation"' (1927/2007, p. 375). Incorporating dissociation as a division of the personality, Janet's definition of hysteria was:

> A form of mental depression [i.e. lowering of the integrative capacity] characterized by a retraction of the field of consciousness and a tendency to the dissociation and emancipation of the systems of ideas and functions that constitute personality (Janet, 1907, p. 332).

Contemporary Conceptions

Since Janet's time, two major conceptualizations of dissociation have been elaborated: a narrow and a broad one (Van der Hart & Dorahy, 2009). The narrow conceptualization, consistent with nineteenth-century views, regards dissociation as a division of consciousness or personality into relatively independent subsystems. For example, based on observations of acutely traumatized combat soldiers, Myers (1940) argued that dissociation pertained to a division between an *emotional* personality, fixated in trauma, and an *apparently normal* personality, focused on daily life challenges. Van der Hart et al. (2006) used Myers' terminology for their theory of *structural dissociation of the personality*, but modified it to refer to 'parts of the personality' instead of 'personalities', on the basis that each person has only one personality, however much it is divided or fragmented. The narrow conceptualization posits that dissociation of the personality gives rise to the manifest phenomena of dissociative symptoms (Dorahy & Van der Hart, 2007).

Since the 1980s, the narrow conceptualization of dissociation has been overshadowed and largely ignored in favour of a phenomenologically based broad conceptualization. In this broad view, dissociation is considered to be not only a lack of integration of psychological functions (itself already more inclusive than the narrow definition), but also a wide range of alterations in attention or consciousness. Such a definition obscures the careful distinction Janet made between dissociation as a *division* of personality and *alterations* of consciousness (cf. Steele, Dorahy, Van der Hart, & Nijenhuis, 2009).

We can see the increasing impact of this broad perspective in the progression of the definition of *dissociation* from the DSM-III (APA, 1980) to the DSM-5 (APA, 2013). In the former, 'dissociation' was defined (in the context of introducing the 'Dissociative Disorders' section), as 'a disturbance or alteration in the normally integrative functions

of identity, memory, or consciousness' (APA, 1980, p. 253). While such a broad definition would clearly allow for a range of experiences beyond those associated with a division of the personality, the definition became even broader in the DSM-IV (APA, 1994). Here, dissociation was defined as 'a disruption in the usually integrated functions of consciousness, memory, identity, or *perception of the environment*' (p. 477, italics added). The latter addition – a dramatic change from former definitions of dissociation – would clearly and explicitly include experiences of intense absorption in an event or derealization during a trauma, whether or not they were related to a division of the personality. And in the DSM-5 (APA, 2013), this definition was further broadened, to 'a disruption of and/or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, *and* behavior' (p. 291, italics added).[7] Note that the use of 'and' (in our added italics) seems to imply that discontinuities must occur in *all* of these domains. This is clearly an error; it is likely that the editors meant to use 'or' or 'and/or', which would mean that disruptions or discontinuities in one or more of these domains could constitute 'dissociation' – clearly, a very broad definition, indeed (though, unlike the ICD-10 definition below, it does not include 'bodily sensations'). The ICD-10 definition (WHO, 1992) is broader than the DSM-IV, but narrower than the DSM-5; dissociation is a 'partial or complete loss of the normal integration between memories of the past, awareness of identity and immediate sensations, and control of bodily movements' (p. 151). Nonetheless, all of the definitions above retained the notion of dissociation as a failure of integration, which is consistent with Janet's ideas.

We believe that these changes reflect two developments, one theoretical and one empirical. The 1970s and 1980s saw a number of important publications about dissociation. For our purposes, we highlight three. In the 1970s, the hypnosis researcher Ernest Hilgard began writing about his *neo-dissociation* theory, which culminated in the publication of his influential book, *Divided Consciousness: Multiple Controls in Human Thought and Action* (Hilgard, 1977). There he presented data on the *hidden observer* phenomenon – that, under hypnosis, some people (not otherwise demonstrating any pathology) can demonstrate a part of themselves not subject to post-hypnotic suggestions at the same time that another part enacts the suggestion (i.e. recognizing that their hand is placed in freezing cold water even as another part denies that the hand is cold). Thus, he argued for a *non-pathological* form of dissociation. Second, the *Dissociative Experiences Scale* (DES, Bernstein & Putnam, 1986) was published in the 1980s, and has been the most widely utilized dissociation instrument since then. The DES is explicitly based on a broad definition of dissociation, and includes many common alterations of consciousness and perception – including mild forms of absorption and depersonalization/derealization. Finally, an influential review of dissociation was published in 1991, arguing that disturbances of consciousness were common during traumatic (traumatizing) events, and deserved the label 'dissociation' (Spiegel & Cardeña, 1991). This was followed by the development of the *Peritraumatic Dissociative Experiences Questionnaire* (Marmar et al., 1994), which focused exclusively on alterations of consciousness and perception during very stressful events (including a sense of time lengthening or shortening, and objects appearing differently in shape or size), along with amnesia.[8] Thus, from the late 1970s through the early 1990s, the concept of dissociation was expanded to include (along with pathological divisions of the personality): (i) hypnotic-based divisions of awareness, (ii) common alterations of awareness, such as absorption, and (iii) alterations of consciousness and perception experienced during or directly

after a highly stressful event. Only the first maintained a focus on a division of the personality, but Hilgard argued that this was not necessarily pathological.

At the same time, the American Psychiatric Association was revising the psychiatric nosology nomenclature. The changes in the definition of dissociation coincided with the DSM-III and DSM-IV committees' explicit emphasis on assessment and reliability over validity. That is, the editors of the DSM-III, and later DSMs, were primarily concerned with how easily and reliably symptoms of a disorder could be assessed. They were only *secondarily* concerned with how valid that assessment information was. Most likely because alterations of consciousness and perception are easier to assess than the implied presence of a division of the personality, symptoms reflecting the former have been emphasized over the latter. But, it appears that this has led to an important loss of validity.

In our opinion, this broad definition has a number of shortcomings. First of all, it implies that functions can be dissociated from each other as if they existed in a psychological vacuum, that is, without being attached to some dissociative part of the personality with its own first-person perspective. Secondly, this definition allows for common and relatively normal alterations of consciousness such as *absorption* (a narrow intense focus of attention on specific internal or external stimuli), which appear unrelated to pathological forms of dissociation. Finally, the broad definition of dissociation includes alterations of perception and consciousness that characterize *derealization* and most forms of *depersonalization*,[9] which are very common during stressful events and occur in many non-dissociative mental disorders, particularly anxiety disorders. The meaning of *dissociation* from the beginning, in *all* senses (social, chemical, *and* psychological), as some sort of separation or division, has been lost in this broad conception.

The debate over the meaning of the term *dissociation* involves at least four related questions or tensions:

i) are transient alterations of consciousness, which do not appear to involve a division of the personality, dissociative (i.e. absorption, peritraumatic depersonalization, and derealization)?
ii) does intense absorption in an activity warrant the term dissociation (i.e. *normal* dissociation)?
iii) is dissociation exclusively trauma related (for example, are post-hypnotic suggestions that imply a division of personality *dissociative*)? and
iv) is dissociation best conceptualized as a *defence*, a capacity (i.e. related to hypnotizability), or a *failure of integration*?

In general, the broad interpretation of dissociation would answer these questions 'yes,' 'yes,' 'no,' and *defence* (or *capacity*), while the narrow interpretation would, following Janet, consider dissociation to be a *failure of integration* (and only secondarily a psychological *defence* with adaptive value), and respond to the other questions in the opposite way (though the case of a transient division of the personality in hypnosis might be an exception).

Proposed Conception

While alterations of consciousness such as absorption, depersonalization, and derealization are common in persons with dissociative disorders, they are not limited to these disorders, as many persons have these experiences. Depersonalization and

derealization are common in a wide range of psychiatric disorders, and *absorption* frequently occurs outside of the context of dissociation of the personality (Steele et al., 2009). Indeed, it is difficult to see how alterations in consciousness such as absorption or most forms of depersonalization/derealization *in and of themselves* could lead to the development of dissociative parts of the personality or dissociative symptoms such as hearing voices. Research efforts such as those reported in Chapter 18 of this book suggest that high levels of dissociation are particularly associated with dual processing capacities, sometimes called *divided attention*. Thus, intense absorption in a particular event or occurrence, *in the absence of evidence for another stream of information processing*, is probably not predictive of dissociation.

In addition, there are significant differences in abuse histories and scores on dissociation measures between depersonalization disorder (DPD), characterized by chronic depersonalization and derealization (without evidence of a division of personality) and other dissociative disorders (Simeon, 2009). This has led some to argue that DPD lies closer to anxiety disorders than dissociative disorders (Baker et al., 2003).

Finally, some cognitive theorists have marshalled existing evidence to compellingly argue that alternations of consciousness involve fundamentally different mechanisms than divisions of the personality (Brown, 2006). While they argue that *both* should be called 'dissociation' (the former, *dissociative detachment*, and the latter, *dissociative compartmentalization*), a position we disagree with, they provide convincing evidence that the two do not deserve the same label.

Based on the above, we argue here for a return to the meaning of 'dissociation' as envisioned by Janet – a trauma-related division of the personality. This position has been articulated most fully by Van der Hart et al. (2006), in their concept of *structural dissociation of the personality* as a division of the personality. More recently, Nijenhuis and Van der Hart (2011) have proposed the following definition of structural or trauma-related dissociation (it is recognized that transient dissociation may occur *without trauma*, as in the case of hypnotic suggestion in susceptible individuals, for example). Trauma-related dissociation involves:

> a division of an individual's personality, that is, of the dynamic, biopsychosocial system as a whole that determines his or her characteristic mental and behavioural actions. This division of personality constitutes a core feature of trauma … (and) evolves when the individual lacks the capacity to integrate adverse experiences in part or in full … The division involves two or more insufficiently integrated dynamic but excessively stable subsystems … Each dissociative subsystem, that is, dissociative part of the personality, minimally includes its own, at least rudimentary, first-person perspective. As each dissociative part, the individual can interact with other dissociative parts and other individuals, at least in principle. (p. 418)

Phenomenologically, dissociation as a division of personality manifests in dissociative symptoms that can be categorized as *negative* (functional losses such as amnesia and paralysis, loss of certain skills such as driving a car) or *positive* (intrusions such as flashbacks or passive influence of other dissociative parts, such as voices commenting, thought withdrawal or insertion, or a sense that one's body is controlled by someone else). Both negative and positive dissociative symptoms can have mental and physical

manifestations. Mental, or *psychoform*, dissociative symptoms include hearing voices and feeling as though thoughts or emotions which do not belong to the person intrude into their mind 'out of the blue' (Schneiderian symptoms). Physical manifestations (i.e. dissociative *somatoform* symptoms) involve body experiences such as anaesthesia or tics, or somatic sensations related to trauma, such as vaginal pain from a past rape (Nijenhuis & Van der Hart, 2011; Van der Hart et al., 2006).

The DSM-5 definition of dissociation primarily relates to *psychoform* dissociative symptoms, not *somatoform* dissociative symptoms, and *positive* dissociative symptoms are often overlooked compared to *negative* dissociative symptoms. Consistent with this bias, while PTSD as a whole is not considered a dissociative disorder in the DSM-5, a *dissociative* subtype of DSM-5 PTSD has now been added, reflecting the core PTSD symptoms plus depersonalization/derealization (see Chapter 16 of this book). But the DSM-5 criteria themselves acknowledge that intrusion phenomena such as flashbacks are dissociative in nature (i.e. *positive* dissociation) and PTSD per se (not only a subtype of it) has been argued to be a dissociative disorder, as it manifests a division of the personality between one part 'stuck' in the trauma and another part that tries to function in daily life (Dorahy & Van der Hart, 2015; Nijenhuis, 2017; Van der Hart et al., 2006).

Thus, we would argue for a return to the original meaning of the term *dissociation*, as a trauma-based division of the personality, and that the various alterations of consciousness that have become subsumed under *dissociation* should be labelled in other ways.

Schneiderian Symptoms as Dissociation or Psychosis?

The first-rank, or Schneiderian, symptoms of schizophrenia are discussed in more detail in Chapter 4 and elsewhere in this book, but must be briefly discussed here, as they throw up an important point of tension between the concepts of dissociation and psychosis. In 1937, Kurt Schneider first proposed nine symptoms (later ten) to be highly predictive for the diagnosis of schizophrenia. After his book, *Clinical Psychopathology* was translated into English (Schneider, 1959), these symptoms became emphasized in the diagnosis of schizophrenia. From the DSM-III and ICD-9 on, they were considered core symptoms of schizophrenia, but have been found to be very common in dissociative disorders, particularly dissociative identity disorder (DID, see Chapters 4 and 12 in this book). Several of the symptoms are referred to as 'passivity phenomena', the experience that one's feelings, impulses, or thoughts are under the control of an 'external force' (for example, the symptoms of 'thought withdrawal' or 'thought insertion', which involve the sensation that some thoughts have been 'removed' from, or inserted into, one's mind). Apparently, Schneider considered these symptoms to reflect a permeability of the 'ego-world boundary' in schizophrenia (Koehler, 1979). However, in DID, they reflect the presence of one part or parts of the personality influencing another part of the personality; such attempts at influence are commonly reported by persons with DID (e.g. Kluft, 1987). The definition of these experiences as *necessarily* delusional (regardless of whether the 'external force' is given a delusional interpretation – as 'the devil', or 'the Secret Service', for example), and therefore psychotic, is highly problematic, as they may simply be accurate descriptions of experiences common in (indeed, *essential to*) severe dissociative disorders. That the same experience may be described as dissociative or psychotic reveals a fundamental tension between understandings of these two

concepts. Indeed, it implies that the current official definition of psychosis (or psychotic 'symptoms' or 'features') *requires* a definition of dissociation as *only* alterations in consciousness – a definition that eliminates a division of the personality from the realm of possibility. These problematic definitions of *psychosis* and *dissociation* are likely one of the reasons for the frequent misdiagnosis of persons with DID as suffering from schizophrenia (Putnam, Guroff, Silberman, Barban, & Post, 1986).[10]

Conclusion

The terms *psychosis*, *trauma*, and *dissociation*, central to the focus of this book, have all been used in a variety of ways over the centuries. We believe that the original, historically and contextually relevant, meanings of these terms, often far from their current usage, continue to be of substantial value. Here, we summarize the views we have presented, and argue for the resurrection of the original connotations.

Psychosis is the only one of the three terms which has always, and only, been applied to psychopathology and yet it is perhaps the most in need of rehabilitation. The original impetus for the introduction of the term was to carve out a middle ground between those who viewed mental disorders as a sickness of the body and those who located the abnormality in the mind or soul. Von Feuchtersleben insisted that it was both, that psychosis was a disorder of the whole personality, and that it was folly to attempt to reduce the pathology to brain dysfunction, or limit it to a disturbance of the mind. We are in great need of such a balanced perspective today, when severe psychopathology is often reduced to brain dysfunction.

Currently, researchers largely use 'psychosis' as shorthand for 'psychotic symptoms', with the former adding nothing to the meaning of symptoms such as delusions or hallucinations. This is particularly problematic as the symptoms designated as 'psychotic' include certain symptoms which appear dissociative and are more common in DID than in schizophrenia. As currently used, 'psychosis' is a signifier to others that the person in question is engaging in behaviour which appears meaningless and has no apparent connection to their lives. It indicates, in a sense, that they are less of a person than others in society – that they have lost an essential component of 'personhood', the capacity to engage in a meaningful dialogue with others. This classical conception of 'psychosis', where the presence of a morbid change in a person is assumed as the only way to explain dramatic changes in behaviour, emotional reactions, and thinking, still has relevance to our current use of the concept. We propose a way to develop this further, by using Janet's concept of a *hierarchy of reality* as a guide – namely, that psychosis results when individuals assign an inappropriately high level of reality to internal experiences such as thoughts and fantasies. This has the advantage of not forcing us to renounce the use of the term *psychosis* when a meaningful connection can be made between life experiences and bizarre behaviour.

Trauma and *dissociation* were first introduced and used in realms other than the psychological one – the former with regard to physical injuries and the latter to describe social or chemical divisions. Both of these original connotations are now in danger of being lost. Since the introduction of the compound term *post-traumatic* in 1980, the meaning of trauma has progressively shifted from the person's *reaction* to an extreme event to the event *itself*. Now, with the introduction of the DSM-5, the transformation

appears to be complete – trauma is defined as specific life-threatening events. We believe this to be a mistake. Research indicates that it is a person's inability to integrate the *meaning* of an experience that is essential to the nature of trauma. While some events, by their very nature, are potentially more traumatizing than others, individual factors are of great significance in determining who does, and who does not, react to extreme events with post-traumatic symptoms – or, as we would say, reacts with dissociation. Indeed, the simple definition of trauma as 'that which causes dissociation' is attractive, and has some merit.

Of all these terms, *dissociation* is the one which has been subjected to the most debate and has also suffered the greatest shifts in meaning. From its original roots as a division or separation in social or chemical domains, *dissociation* has come to mean a wide range of disturbances in consciousness, commonplace as well as pathological. The reasons for this shift are not entirely clear but, like trauma, this trend appears to have started a few decades ago and is accelerating. We argue that the current use of *dissociation* to describe alterations of consciousness such as absorption and derealization or depersonalization (excepting 'out-of-body' experiences) is historically inaccurate and poorly supported empirically. While all definitions of dissociation accept *divisions of the personality* as dissociation, the broad definition claims that common alterations in consciousness deserve the same title as these severe structural divisions of the personality. We believe, on both historical and empirical grounds, that the meaning of dissociation should revert to its historical roots, as a trauma-based *division* of the personality.

In order to understand the complex relations between psychosis, trauma, and dissociation, we must first have a clear picture of what these terms mean. We hope that the considerations laid out in this chapter provide a first step toward that goal.

Notes

1 Strikingly, the wording here is identical to Freud's (1924) conception of reality testing, as the creation of a new reality through the development of delusions.
2 Of note, the term 'negative psychotic symptoms' is increasingly being used (including in the proposed ICD-11) to refer to the negative symptoms of schizophrenia, such as 'flat' affect and avolition. This is a curious and illogical development and is not consistent with any recent proposed definition of psychosis.
3 One of the first to make a similar argument was Bowlby (1979, revised in 1985 and published in *A Secure Base*, 1988), in his remarkable paper 'On knowing what you are not supposed to know, and feeling what you are not supposed to feel'. There, he discusses a variety of ways in which parents may invalidate a child's reality, ranging from denial of experienced emotions to denial of witnessing a parental suicide. Other events, such as sexual abuse by a parent, are often not denied but simply never acknowledged on any level. Bowlby makes clear links between such experiences and subsequent severe psychopathology.
4 The rise of the gaming and online 'worlds', where 'actions' can have consequences, including in the 'real' world, complicates this issue and has clear implications for mental health, but is beyond the scope of this chapter.
5 In this, they were following Charcot and Janet, who expressed similar ideas previously or concurrently with Breuer and Freud (who acknowledged this). Freud, of course,

repudiated all of these ideas within a few years, with considerable consequences for trauma patients.

6 The relation between *trauma* and *stress* is a complex one that space will not allow us to explore here. Of note, the term *traumatic stress* is sometimes used, as though *trauma* simply indicated a very high level of *stress*. But this is clearly inadequate, as the individual *meaning* of an event is essential to the understanding of *trauma*. *Stress* is often used in an entirely *quantitative* way ('more' or 'less' stressful situations), but *trauma* cannot adequate be conceptualized in the same manner.

7 Curiously, the definition of dissociation in the DSM-5 glossary is somewhat different. Primarily emphasizing 'compartmentalization' without any reference to a division of personality, it describes dissociation as 'the splitting off of clusters of mental contents from conscious awareness' (p. 820).

8 As 'peri-' is a prefix meaning 'around' or 'surrounding', 'peritraumatic', like 'posttraumatic' implies that a 'trauma' is an event delimited in time.

9 Those forms of depersonalization characterized by separate observing and experiencing parts of the person (e.g., ego-observing phenomena such as 'out-of-body' experiences) are manifestations of a division of the personality, and therefore consistent with the narrow conception of dissociation.

10 The other main reason, of course, is that clinicians are not directed to consider DID as a differential diagnosis for schizophrenia. This is particularly problematic as the DSM-5 clearly recognizes – in its respective diagnostic sections – overlapping Schneiderian symptoms in schizophrenia and DID. Bizarre delusions, which until the DSM-5 were considered characteristic of schizophrenia, include *delusions of being controlled*, defined as a delusion in which 'feelings, impulses, thoughts or actions are experienced as being under the control of some external force rather than being under one's own control' (APA, 2013, p. 819). At the same time, in the dissociative disorders section, characteristic features of DID are reported to include the following: 'Strong emotions, impulses, and even speech or other actions may suddenly emerge, without a sense of personal ownership or control (sense of agency) … Alterations in sense of self and loss of personal agency may be accompanied by a feeling that these attitudes, emotions, and behaviours – even one's body – are "not mine" and/or are "not under my control"' (p. 293). Thus, on the one hand, these experiences are described as psychotic (delusional), while on the other hand, these same experiences are described as dissociative. Clearly, this could easily lead to a situation where a person's diagnosis depends primarily on which section of the DSM-5 their clinician is most comfortable with.

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2

Historical Conceptions of Dissociative and Psychotic Disorders

From Mesmer to the Twentieth Century

Warwick Middleton, Martin J. Dorahy, and Andrew Moskowitz

An understanding of the modern construction of dissociative disorders and psychotic disorders rests on an appreciation of the historical forces shaping their evolution. Despite their independent status within current psychiatric thought, psychosis and dissociation are not orthogonal constructs. Their histories show that while they were initially studied as separate entities, they became more fused (particularly with regard to the developing concept of schizophrenia) in the late nineteenth and early twentieth centuries before becoming disconnected again (Gainer, 1994). This chapter will focus on the history of dissociation and psychosis, particularly as it relates to the concepts of hysteria and schizophrenia, from around the time of the Enlightenment until the beginning of the twentieth century. Thus, it tracks the independent study of dissociation and psychosis, and ends with these constructs more merged in psychiatric thought, in the guise of Bleuler's schizophrenia (see Moskowitz & Heim, 2011, and Chapter 4 of this book).

Dissociation: Mesmerism, Multiple Personalities, and Hysteria

The first account of an individual whose reported phenomenology approximated what in time would be called multiple personality disorder comes from Jeanne Fery, a 25-year-old Dominican nun, who wrote about her own exorcism in Mons, France, in 1584/1585. Her exorcists also wrote a detailed account which documents both identity fragmentation and a past history of childhood trauma. There were multiple named personality states described, as well as amnesia for the switches, along with marked somatic symptoms. We learn that one of her earliest recalled experiences (i.e. the appearances of 'devils') occurred in response to being beaten as a child. The language suggests sexual abuse, perhaps by the father, occurring when Jeanne was aged four (Van der Hart, Lierens, & Goodwin, 1996).

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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Van der Hart et al. (1996) detailed the experiences described centuries ago:

> Jeanne's alters were at times visualized, at times heard arguing inside, and at times took over her body in violent pseudoseizures, rage attacks requiring restraints (from which she escaped), compulsive suicide attempts, regression to a childlike state, and episodes of prolonged sobbing and intense physical pain (especially headache). Sleep disturbance, abysmal sadness, conversion blindness, shivering, disordered eating, mutism, contorted facies, inexplicably lost and found objects, and episodic loss of knowledge and skills completed a clinical picture quite familiar to contemporary clinicians working with dissociative disorders (p. 1).

Despite the clarity of this presentation, and what we now know as its psychobiological foundations, it was not until two centuries later that the seeds of a framework that could begin to understand multiple personality scientifically began to be sowed.

The emergence of dynamic psychiatry can be traced to a pivotal clash of ideologies that occurred in 1775 and pitted Johann Gassner, a modest country priest, popular healer, and exorcist, against Anton Mesmer, a flamboyant, vain, and tempestuous son of the Enlightenment (Bliss, 1986; Ellenberger, 1970). Taking the side of science, Mesmer began the process of wrestling with the church's notions of mental illness being the work of the Devil, sorcery, or overt diabolical possession, and replacing it with a theory of illness allied to scientific explanation. Despite the imprimatur of science, Mesmer's use of magnetic cures, which involved evoking a physical 'crisis' to aid induction, in effect 'amounted to Gassner's procedure, without involving the use of exorcism' (Ellenberger, 1970, p. 57). What both men demonstrated, though explained in their own paradigm, was that powerful unconscious processes were at work and that some individuals could, seemingly, be cured of certain maladies by succumbing to a process associated with the induction of a state of altered consciousness.

One of Mesmer's students, Amand-Marie-Jacques de Chastenet, Marquis de Puységur, made the important discovery that a 'crisis' was not needed to induce the magnetic sleep or artificial somnambulistic state that Mesmer discovered (Forrest, 1999). What was on display during Puységur's artificial somnambulism was a controlled and temporary division (dissociation) of the personality, so that one state was interacting with the magnetizer and another was not. In those capable of this seeming complete dissociation, Puységur noted, 'The line of demarcation is so complete that these two states may almost be described as two separate existences' (cited in Forrest, 1999, p. 95).

The study of magnetism (or 'mesmerism') eventually became the study of hypnosis, when James Braid introduced that term in 1843. The scientific study of hypnosis was to provide a portal from which to observe, understand, and treat hysteria, along with the dissociative structure and symptomatology central to hysteria-spectrum disorders (Van der Hart & Dorahy, 2009).

Accounts of individuals switching between identity states and demonstrating amnesia between states, or switching into fugue states, had always been part of the literature associated with mesmerism. In 1791 the German mesmerist, Eberhardt Gmelin published an 87-page report on a case of 'exchanged personality' in a 20-year-old woman who 'suddenly "exchanged" her own personality for the manners and ways of a French-born lady, imitating her and speaking French perfectly' (Ellenberger, 1970, p. 127). But in her German identity state, the woman knew nothing of her French personality.

The most influential early case of dual personality or multiple personality disorder (known as dissociative identity disorder) was that of Mary Reynolds, first published by Samuel Latham Mitchell in 1816. The case of 'Estelle', treated by Père Despine, Senior and reported in detail in 1840, represented the first documentation of a patient with multiple personality disorder (MPD) who was brought to integration by a hypnotically facilitated treatment (Fine, 1988). She was one of 40 or so MPD patients treated by Despine, his son, and his nephew (who were also trained as 'magnetizers'). Many cases of dual and multiple personality were reported in the late 1800s and early 1900s, including Charcot's patient Augustine, as documented in 1885 in photographic images of her in different dissociative states (Hacking, 1995).

Briquet's interest in hysteria in the mid-1800s (e.g. Briquet, 1859) was taken up by Charcot, who maintained that the primary reason for hysteria was constitutional weakness (Van der Hart, 2008). It was Charcot, a world-renowned neurologist based at the Salpêtrière in Paris, who was uniquely placed to bring about what had previously not been possible, a synthesis between the traditions of the hypnotists and that of official psychiatry, at the same time elevating hysteria to the level of a condition worthy of serious scientific investigation. He came to see hysteria as related to *dissociation*, the disruption of psychological unity (Van der Hart, 2008), a theme which Pierre Janet considerably expanded.

However, when Charcot died in 1893, his legacy was immediately undermined and Joseph Babinski, a previously favoured disciple, became the main protagonist in a radical reaction against Charcot's concept of hysteria (Ellenberger, 1970). Babinski claimed that hysteria was *nothing but* the result of suggestion, and could be cured through 'persuasion', a theme that has continually been reborn to the present day (despite the absence of empirical data) and which, at the time, was severely criticized by Janet. Janet conceptualized hysteria as a permanent state of dual or multiple personality. At the same time, he was concerned about the significant degree to which hypnotic conditions could be moulded by the hypnotist (Ellenberger, 1970). Consistent with this, Charcot's 'star' hysterical patient, Blanche Wittmann, never experienced another convulsion, paralysis, or delirium following his death (Hustvedt, 2011).

In his pre-medical career as a philosopher, Janet (1859–1947) studied a woman with hysteria named Léonie. Léonie displayed the capacity to be hypnotized and demonstrated the features of what was later called MPD. His study of Léonie initiated his interest in hypnosis and hysteria and led to Charcot inviting him to the Salpêtrière. In 1889 Janet published 'Psychological Automatism', based on his study of 14 hysterical women, 5 hysterical men and 8 suffering with psychosis or epilepsy. Much of the research focussed on Léonie and three other hysterical women. In this work, Janet laid the foundations for his theory of dissociation, demonstrating that some individuals can form a number of psychic structures which come about as the personality divides in response to traumatic and other events which lower integrative mental capacity (Van der Hart & Dorahy, 2009). These psychological structures have their own personal traits, which Janet conceived of as coexisting and being able to think and react simultaneously at a subconscious level, but which were also capable of taking over consciousness (e.g. in hypnosis or with automatic writing; Crabtree, 1993; Van der Hart & Friedman, 1989). Janet's work with patients suffering from amnesias, fugues, conversion symptoms, and

'successive personalities' led to his postulation that such dissociative symptoms were attributed to split-off or dissociative parts of the personality. These dissociative parts each centred around what Janet referred to as 'subconscious fixed ideas' (see Van der Hart & Witztum, Chapter 19 of this book). Influencing Freud and Breuer, Janet demonstrated that the dissociated elements which resulted in the patient's symptoms could often be traced to past traumatic experiences and could be treated by bringing into consciousness the split-off memories and associated affects (Bliss, 1986; Ellenberger, 1970).

Josef Breuer (1842–1925) published his description of Anna O. (Bertha Pappenheim) with other cases contributed by Freud in *Studies on Hysteria* (Breuer & Freud, 1895/1955). Anna O. was an intelligent young woman with a complex mix of symptoms (e.g. somatoform, dissociative, post-traumatic) originating from a dissociative organization (Loewenstein, 1993). She switched between different states of consciousness, organized into what Breuer, following French colleagues, called 'double conscience' (double consciousness). He noted:

> It is hard to avoid expressing the situation by saying that the patient was split into two personalities of which one was mentally normal and the other insane … Not only did the second state intrude into the first one, but … even when she was in a very bad condition – a clear-sighted and calm observer sat, as she put it, in a corner of her brain and looked on at all the mad business (Breuer & Freud, 1960, p. 46).

In presenting the dissociative structure of hysteria, Breuer, and Freud, inspired by Janet and other French colleagues, wrote in 1893 (later published in their *Studies on Hysteria*):

> The longer we have been occupied with these phenomena the more we have become convinced that the splitting of consciousness so striking in the familiar classical cases under the form of 'double conscience' is present to a rudimentary degree in every hysteria and that a tendency to such dissociation, and with it the emergence of abnormal states of consciousness (which we shall bring together under the term 'hypnoid'), is the basic phenomena of this neurosis (Breuer & Freud, 1960, p. 12).

Freud's (1856–1939) original work with hysteria saw him utilize Janet's ideas on dissociation, embrace Breuer's cathartic method, and enthusiastically pursue a model based on the belief that hysteria invariably had its origins in sexual abuse occurring in early childhood, usually at the hands of the child's father (e.g. Freud, 1896/1959).[1] Yet, due to multiple determinants, in personal, professional, and intellectual domains (DeMause, 1991; Masson, 1984), Freud's so-called 'seduction theory' of hysteria was replaced by one based around infantile sexuality, and ultimately the allegedly pervasive and widespread tendency to develop Oedipal fantasies. While Janet had initially viewed Freud's work and Breuer's work as confirming his own research, it soon became apparent that they were more intent on replacing him than in anointing him as Charcot's heir apparent. Freud aggressively rejected Janet's belief in degeneration (i.e. that pathological dissociated states occurred in those with inherited vulnerability).

Psychosis: Insanity, Dementia Praecox, and Schizophrenia

The growth of interest in hypnosis, which eventually followed Mesmer's animal magnetism, marked a systematic secularization of interest in phenomena previously ascribed to the Devil and his minions. The insane, gathered in asylums, were the recipients of patchily improving conditions and growing scientific interest on the part of superintendents increasingly motivated to study the nature of the illnesses of their patients, including how best to classify them. In 1808, the term *psychiatry* was first used by Johann Reil in defining treatment of the mind (Stone, 1998).

There was now an opportunity to bring scientific observations on a larger scale to the isolated accounts of earlier individual observers such as Thomas Sydenham (1624–1689). Sydenham had used the term hysteria to signify any mental disorder short of 'frank alienation' (outright psychosis), while Thomas Willis (1621–1675) outlined a clinical picture as early as 1672 of a condition closely resembling what Emil Kraepelin, over two centuries later, would call dementia praecox.

The astute and detailed observations of John Haslam (1766–1844) provided profiles of various forms of paralysis including general paresis and cases consistent with what would in time be called 'schizophrenia' (both child and adult forms). Haslam's *Illustrations of Madness* (1810) was the first medical book detailing a single case of insanity, that of James Tilly Matthews, a paranoid psychotic man who believed that an 'infernal machine' was controlling his life and torturing him (Millon, 2004; Stone, 1998). Haslam also recognized, as had Aretaeus in the first century, that in some individuals, states of excitement and depression alternated. In 1809 Haslam observed, 'Mad is therefore not a complex idea, as has been supposed, but a complex term for all the forms and varieties of this disease … to discover an infallible definition of madness … I believe will be found impossible, as it is an attempt to comprise, in a few words, the wide range and mutable character of a Proteus disorder' (Millon, 2004, p. 167).

Philippe Pinel (1745–1826) is widely credited with introducing 'moral treatment' of the mentally ill. His student and successor at the Salpêtrière, Jean-Étienne-Dominique Esquirol (1772–1840), published in 1838 what many see as the first modern treatise on mental disorders, *Des Maladies Mentales*, which incorporated for the first time a statistical approach to mental illnesses. The first psychiatrist to suggest that personality vulnerabilities interacting with external precipitants might serve as a basis for understanding mental illness, Esquirol was interested in exploring the inner functioning of his patients' minds, including those processes that generated manifest deliria and hallucinations (Millon, 2004). It was Esquirol who introduced the term *hallucinations* and differentiated them from *illusions* ('false impressions based on misinterpretations of reality'). His nosology was relatively simple, arranged under three main headings; *délire général* (general madness), *délire partielle* (partial madness), and *affaiblissement intellectuelle* (weakening of the intellect). The first term described an all-encompassing affliction, to be distinguished from *délire partielle* describing a compartmentalized condition (e.g. paranoid thinking that was confined to just one area of life). In time the first term (*délire général*) became *manie* (though with a broader meaning than the 'mania' of bipolar illness), while *délire partielle* became *monomanie* (the forerunner of the modern 'psychopathy'). There was 'affective monomania' (the *triste* type equating with the modern concept of 'recurrent depression'), and pyromanie or kleptomanie, terms still commonly used.

Esquirol divided 'intellectual weakness' into congenital and acquired types (Stone, 1998), the former taking a form that the Belgian biologically oriented psychiatrist Benedict Augustin Morel (1809–1873) would later call '*déménce précoce*'. Morel's term initially referred to a 14-year-old boy who, having been a cheerful and good student, progressively lost intellectual capacities as well as becoming increasingly withdrawn and melancholic (Millon, 2004). Morel is particularly associated with launching the concept of degeneration, where an undesirable characteristic (e.g. alcoholism, criminality), was believed to be transmitted via heredity, worsening with succeeding generations (Shorter, 1997).[2]

It was around this time (the mid-nineteenth century) that the term *psychosis* was first proposed. It was coined in a psychiatric textbook (translated into English in 1847) by the Austrian physician, Ernst von Feuchtersleben (1806–1849) to replace *insanity* or *lunacy* (Beer, 1995).[3] Ironically, but consistent with the prevailing view at the time (and for most of the next half-century), Feuchtersleben considered hysteria to be a *neurosis* (a term proposed a half-century before for any disease caused by the functioning of the nerves), and as such *more* biologically based than *psychosis*.

In less than a generation, however, this changed as, impacted by developments in neurology, neurosis came to define disorders of the nervous system with no known organic basis (Bürgy, 2008). Under the influence of Wilhelm Griesinger, the somaticists 'won' the soul versus soma dispute and 'psychosis' became a term for organically based mental disorders (Beer, 1995). Griesinger (1817–1868) was an influential German biological psychiatrist who advanced the concept that 'mental diseases are brain diseases' and that mental disorders, like most medical conditions, are chronically progressive (Millon, 2004). Griesinger became the single most important representative of what is known as the first biological psychiatry. The differentiation between psychosis (organic) and neurosis (non-organic) led to the view that the psychoses were caused by organic *processes,* while the neuroses were a by-product of psychological *development* that existed along a continuum with health (Bürgy, 2008).

As notions of psychosis were evolving, approaches to conceptualizing psychotic disorders were also changing. Karl Ludwig Kahlbaum (1828–1899) did not accept Heinrich Neumann's 1859 assertion that there was but one 'unitary psychosis' (Shorter, 1997). Kahlbaum was impressed by Esquirol's emphasis on age of onset, variable chronicity, and deteriorating course in making distinctions between mental illnesses. He pointed out how unhelpful diagnostically it was to group disorders on the basis of similarities in overt symptomatology. Indeed, the subsequent history of psychiatry has borne out this observation, with the great majority of symptoms associated with mental illness being of themselves diagnostically non-specific (Millon, 2004; Shorter, 1997; Stone, 1998).

Kahlbaum established the importance of longitudinal factors in psychiatric diagnosis, labelling two newly observed disorders, *hebephrenia* (with his student, Ewald Hecker), a psychosis of young adolescents characterized by mental disorientation, and *catatonia*, a condition where the patient displayed no reactivity and sat mute and physically immobile. Catatonia was a renaming of a phenomenon that had long been recognized as part of the immobile apathy known as *melancholia attonita* (attonita = thunderstruck) (Shorter, 1997).

Emil Kraepelin (1856–1926) built on the observations of Griesinger and the longitudinal approach of Kahlbaum. While he wrote about every major type of psychiatric disorder of his time, his major interest was with psychosis. Kraepelin recorded data on

prodigious numbers of patients with the long-term goal of bringing order between, on the one hand, observed symptoms and, on the other, patterns of onset, course, and outcome. In the course of nine editions of his textbook of psychiatry (the last unfinished at the time of his death), Kraepelin developed a nosology of psychosis that is still very evident in the structure of 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; APA, 2013).

On the basis of his longitudinal data of cases with poor outcome, Kraepelin began to group together illnesses previously described by others that apparently had a poor outcome. He included *catatonia*, *hebephrenia*, and finally *dementia paranoides*, a disease which like the first two led to rapid deterioration, but which was characterized by bizarre fears of persecution. By the sixth edition of his textbook (1899), Kraepelin had outlined the definitive pattern of two modern major disorders, *manic depressive psychosis* (bipolar disorder) and *dementia praecox* (schizophrenic disorders). In addition to the necessary progressive and inevitable decline, Kraepelin claimed that essential features of dementia praecox included discrepancies between thought and emotion, negativism, stereotypical behaviours, hallucinations, delusions, and disordered thought. For Kraepelin (1919), 'no single morbid symptom' (p. 256) characterized dementia praecox, nor was there an apparent interrelationship between the great variety of symptoms he described other than as a reflection of dementia and associated loss of psychic unity.

Kraepelin's belief that the aetiology of most psychiatric disorders involved inherent bodily defects, allied with his focus on a rapid decline, encouraged pessimism in respect to the treatment of dementia praecox. An additional category of illness described by Kraepelin was *paranoia*, a chronic illness characterized by delusional beliefs in the absence of significant changes to personality, and which was differentiated from dementia praecox because of the absence of deficits of thinking and volition. Kraepelin finally reached the conclusion that paranoia included some less severe cases which were associated with the possibility of partial recovery.

Dissociation, Psychosis, and Schizophrenia: The Merging of Constructs

The first use of the term 'dissociation' in the medical literature was by Benjamin Rush (1818), who used the term to capture the alterations in mood states and their seemingly disconnected appearance in what is now called bipolar disorder. It was not until much after Rush that dissociation, as understood and studied by the nineteenth century giants of psychiatry, came to be more closely associated with psychosis. In the late 1800s, there were at times cross-overs between those studying hysteria and its dissociative difficulties and those focused on psychosis and working in asylums. Adolf Meyer, an adherent of the Kraepelian tradition, and Bleuler, along with Freud (and of course, Janet), spent time with Charcot at the Salpêtrière, while Auguste Forel (who trained in hypnosis at the school of Nancy under Ambrose Bernheim) became one of the leading specialists in the use of hypnosis and had as students Bleuler and Meyer. Forel was Bleuler's immediate predecessor as head of the Burghölzli hospital (Ellenberger, 1970). This cross-fertilization undoubtedly contributed to some links being made between psychosis and dissociation.

Hallucinations have had a long association with hysteria. Charcot gives glimpses of the association between hallucinations, the manifestations of hysteria (conceptualized as having a dissociative basis), and their postulated traumatic origins in a clinical vignette concerning hysteria with contractures:

> At the moment of the attack, the patient was in the grip of a delirium that related to the events that presumably gave shape to the initial crises: she addressed imaginary persons with furious invective: 'Criminals!, Thieves!, Burn them!, Burn them!, Oh, the dogs! They're biting me!' So many memories, doubtless, of emotions of her youth (Charcot, 1875, cited in Stone, 1998, p. 101).

It was recognized as early as the mid-19th century 1865 by Moreau de Tours that a florid psychotic presentation could be precipitated by acute stress (see Van der Hart, Witztum, & Friedman, 1993). Janet saw such a psychosis as a dissociative state associated with a splitting or doubling of the mind, the manifestations of subconscious phenomena, and associated altered states of consciousness (see Chapters 3 and 19 of this book). While hysterical psychosis had widespread recognition during the latter part of the nineteenth century it, like the diagnosis of MPD, largely faded from general use. One possible exception to this was in Scandinavia, where Wimmer's (1916/2003) conceptualization of 'psychogenic psychosis' continued to generate interest and influence up to recent times (Castagnini, 2010). For Wimmer, psychogenic psychosis subsumed terms such as reactive psychosis and hysterical psychosis. Psychogenic psychosis was conceived of as a category of mental illness distinct from schizophrenia and manic depression. It had its origin in a combination of biological and psychosocial factors, along with traumatic stress, and included delusional (paranoia) and dissociative features (Schioldann, 2011; Wimmer, 1916/2003).

While Kraepelin's concept of dementia praecox did not directly embrace dissociation,[4] many others writing around his time were convinced that a dissociation-like mechanism was central to the disorder (Scharfetter, 2001, and Chapter 5 of this book). Psychological concepts argued to be central to dementia praecox, such as Erwin Stransky's (1877–1962) *intrapsychic ataxia* (a disconnection between emotional and intellectual spheres) and Otto Gross's (1877–1920) *dementia sejunctiva*, relied heavily on a 'splitting' metaphor (Berrios, Luque, & Villagrán, 2003), and Carl Jung, working closely with Bleuler, explicitly linked dissociation (and hysteria) with dementia praecox in his 1907 book, *The Psychology of Dementia Praecox* (Jung, 1907). This in turn, infused with Janetian concepts (despite Jung's insistence on Freud's influence), was a major influence for Bleuler, whose concept of schizophrenia, with its core deficit *the 'splitting' of psychological functions*, provides the clearest fusion of dissociation and psychotic concepts to date (see Moskowitz & Heim, 2011, and Chapter 4 of this book).

As the last flickering lights of professional interest in dissociative disorders dimly lit the path into the twentieth century, Forel observed in 1907 (1927) that 'one can produce many phenomena (hallucinations, false beliefs, deceptions of memory, and the like) in the hypnotized [induced dissociation] which are also to be observed in the insane' (pp. 170–171). Morton Prince (1854–1929), the prominent American pioneer in the study of dissociation, listed automatic writing, hypnosis, visual and auditory hallucinations, dreams, and crystal gazing as examples of the subconscious revealing 'forgotten' experiences. In 1906, Prince published what up to then was the most detailed study of a single

case of MPD. In presenting Miss Beauchamp, Prince clearly understood that her hallucinations had their origin in dissociated fixed ideas from the patient's autobiographical past. In one instance, he demonstrated that a fixed idea that she should not divulge a particular secret, which resided in a dissociative identity with its origin in childhood, was experienced as an auditory hallucination when another dissociative identity attempted to disclose the details: 'A warning voice which seemed to her to come from the next room sounded in her ear, "Don't, don't!" ' (1906, p. 507).

The increasing overlap between dissociation and psychosis meant that many theoreticians of the time felt it important to clearly distinguish dissociation from psychosis (e.g. Kraepelin, 1919; Prince, 1908). In describing dissociation and the 'double' or 'multiple' personalities it can lead to, Prince (1908) recognized the possibility for confusion with psychosis. In differentiating the terms, he used 'disintegrated' to illustrate how divisions (dissociation) can occur in the so-called 'normal personality' and alternate or simultaneous secondary personalities can develop. He notes:

> It will thus be seen that secondary personalities are formed by the disintegration of the original normal personality. Disintegration as thus used must not be confused with the same term sometimes employed in the sense of degeneration, meaning a destroyed mind or organically diseased brain. Degeneration implies destruction of normal psychical processes, and may be equivalent to insanity; whereas the disintegration resulting in multiple personality is only a functional dissociation of that complex organization which constitutes a normal self. The elementary psychical processes, in themselves normal, are capable of being reassociated into a normal whole (p. 3).

Conclusion

What had started out a century earlier as two different journeys with two different groups of patients – the magnetizers and their hysteria-spectrum patients and the asylum physicians and their psychotic inpatients – was now a field of overlapping enterprises. Paradigms developed on one side of the original divide between hysteria/dissociative disorders and the functional psychoses/schizophrenia moved over to occupy the middle ground. In the 136 years between the launch of mesmerism and Bleuler's 1911/1950 text on 'the group of schizophrenias', Western psychotherapy had evolved along with sophisticated observations on the unconscious. Hysteria and related dissociative conditions briefly enjoyed an insecure prominence, and a system of classification for psychotic illnesses had been laid down that in its essentials is still very recognizable in the DSM-5 (APA, 2013). Yet already basic trends were in evidence that are being now revisited and which are expanded upon by other authors in this volume.

Notes

1 Freud's implication of the father in the patient's sexual abuse history is most clearly stated in a letter to Fliess in 1897 (Freud, 1897).

2 Belief in a chronic path of deterioration was to become a central theme of Emil Kraepelin's belief that the course of a mental disorder, rather than phenomena observed cross-sectionally, was its defining feature.

3 Recent historical evidence suggests that Feuchtersleben's use of the term 'psychosis' may have been preceded by the German physician Carl Freidrich Canstatt, who used 'psychosis' to distinguish psychologically based neuroses from other diseases of the nervous system, which the term *neurosis* broadly signified at that point (Bürgy, 2008). This use, however, received limited attention, unlike Feuchtersleben's a few years later.

4 But dissociative concepts were not completely absent from his conceptualization. See, for example, his insistence that dementia praecox led to a 'loss of the inner unity of the activities of intellect, emotion and volition, in themselves and among one another' (Kraepelin, 1919, pp. 74–75), a description that sounds very much like contemporary definitions of dissociation.

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3

Hysterical Psychosis

A Historical Review and Empirical Evaluation

Eliezer Witztum and Onno van der Hart

The concept of hysterical psychosis (HP) suffered a curious fate in the history of psychiatry. During the second half of the nineteenth century this disorder, a traumatically based psychotic disorder, was well known and thoroughly studied, particularly in French psychiatry. In the early twentieth century, however, the diagnosis of hysteria, and of HP, fell into disuse. Patients formerly considered to suffer from HP were diagnosed as schizophrenic or as malingering. Attempts to reintroduce this diagnostic category have failed, perhaps partly because the term 'hysterical' is seen by many as having pejorative connotations. The DSM-III-R (APA, 1987) index lists HP, but refers readers to 'Brief Reactive Psychosis' (BRP) and to 'Factitious Disorder with psychological symptoms'. BRP, first included in the DSM-III (APA, 1980), bears some similarities to HP, as it is considered a psychotic response to major stress, such as the loss of a loved one or the psychological trauma of combat. However, in the DSM-IV (APA, 1994) the name was changed to 'Brief Psychotic Disorder', with the argument that the disorder could occur in the absence of a 'marked stressor', and the same diagnostic criteria would apply (psychotic symptoms lasting less than a month). 'Brief reactive psychosis' is included only in parenthesis after the specifier 'with marked stressor'. The diagnosis remains the same in the DSM-5 (APA, 2013).

The World Health Organization's ICD-10 (WHO, 1992) perhaps comes closer to HP in its definition of 'Acute or Transient Psychotic Disorder'. It allows (but does not require) the presence of a stressor, describes an acute onset of symptoms with frequent 'perplexity and puzzlement', and allows for a duration of up to three months. Organic causation must be ruled out. The proposed ICD-11 category is essentially identical, but adds that symptoms typically change from day to day, or even hour to hour, both in nature and intensity.

Thus, the dominant diagnostic systems have progressively minimized the importance of a precipitating stressor, emphasizing instead the brevity of the symptoms, and insisting that the proposed symptom picture is identical – with or without evidence of a stressor.

Nonetheless, there is clear evidence that reactive/hysterical psychoses *do* occur, that they are different in nature from other forms of psychosis, and that they need not be brief in duration (Breuer, 1895; Breukink, 1923, 1924; Van der Hart & Van der Velden, 1987; Van der Hart, Witztum, & Friedman, 1993). In reviewing early and recent

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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literature on HP, we emphasize the essential role of traumatically induced dissociation in its genesis, the recognition of which, we argue, is crucial for forming an accurate diagnostic impression and for developing effective treatment approaches, which may include hypnotherapy.

Early Literature on Hysterical Psychosis

During the past century and a half, many publications on HP referred to its traumatic origins (see Van der Hart et al., 1993). Important observations were also made about the phenomenology of HP and its curability through psychotherapy, particularly with the use of hypnosis. Unfortunately, many of the authors documenting cases concentrated on symptomatology and treatment rather than the aetiology of HP (e.g. severe stress, loss, or trauma).

One of the first historical reports of HP in which traumatic origins were clearly described and made the focus of treatment was published in 1868 (Hoek, 1868; cf. Van der Hart & Van der Velden, 1987). It concerned Rika van B., a young woman treated by the Dutch physician Andries Hoek in 1851 and 1852. He described her as suffering a range of traumatic experiences, including repeated sexual abuse, rape, a servant drowning, and finally her fiancé killing himself when she broke her engagement, which led to her decompensation. Her symptoms included periods of continuous talking and raving; the dissociative symptoms of amnesia, hallucinations, and pseudo-epileptic seizures; and depression with suicidal urges. She also experienced intense re-enactments of the traumatic events, for which she was amnestic afterwards. However, following hypnosis, when she was in the 'hypnotic state', she was very lucid; she could narrate her traumatic experiences calmly, explain what was wrong with her, and give her physician guidance as to her treatment, which proved central to her cure.

For a long time, Hoek's important case study remained unique. While his French contemporaries, notably Moreau de Tours (1845, 1855, 1865, 1869), were also studying HP, they were more concerned with describing its presenting characteristics than its traumatic origins and associated treatment. This focus lead to the identification of four basic features of HP: (i) a similarity to dreams, (ii) curability (using psychotherapy), (iii) plasticity or polymorphism, and (iv) analogy with chemically induced (e.g. hashish) 'artificial delirium'. It was only through the works of Janet and then Breuer and Freud that a more complete understanding of trauma-induced HP became possible.

Hysterical Psychosis in Pierre Janet's Dissociation Theory

Following Moreau de Tours (1855, 1865, 1869), Pierre Janet described HP as a kind of 'waking dream' in which the subject could not differentiate between the dream elements and normal perceptions (Janet, 1894/5, 1901).

> Hystericals dream very much during the night and even during the day … These dreams have usually two characteristics: (1) They take place in abnormal states or subconsciously. They disturb the normal thought by diminishing the disposable

> force of attention, but they do not mingle with it. (2) They generally cover only a small number of subjects, and these subjects are always the same. The dream may increase under various circumstances, become complicated in all its smallest details, and mingle with normal perception (Janet, 1901, p. 460).

Through clinical observation of numerous hysterical patients, Janet established that these so-called *waking dreams* were related to traumatic experiences (Janet, 1889, 1898, 1911; cf. Van der Kolk, Brown, & Van der Hart, 1989).

According to Janet (1894/5), a psychosis could be considered hysterical if its dissociative nature could be established. The criteria for this were that: (i) the psychosis included dissociative phenomena (such as amnesia and anaesthesia); (ii) the psychosis itself was part of a dissociated mental state (which could alternate with other mental states or parts of the personality); (iii) a doubling of the mind occured (*dédoublement de la personnalité*; i.e. a division of the personality into subsystems that were normally integrated, each with its own sense of self); (iv) subconscious phenomena existed (such as utterances and behavioural actions outside 'personal' consciousness); and (v) altered states of consciousness occured. Thus, the HP subject presented in a psychotic state which had no apparent connection to his or her current reality. However, the therapist might discover that it had a direct connection to a past reality.

Janet believed that HP can develop progressively. Initially, a certain sequence of images (e.g. the re-enactment of a traumatizing event) dominates consciousness during an hysterical attack. Over time, the traumatic content may also occur during intervals between attacks, transforming HP into a chronic psychosis. Janet believed that HP could be treated with psychotherapy, because its dissociative nature implied high hypnotizability. Hypnotherapy was thus the treatment of choice in these cases (Van der Hart, Brown, & Van der Kolk, 1989). One of Janet's examples illustrating this principle concerned the case of Achille, 38, a business man with no prior history of pathology, presenting with unintelligible speech and actions (Janet, 1894/5; cf. Nemiah, 1974; Witztum & Van der Hart, 1992). As summarized in Van der Hart et al. (1993):

> Achille saw and heard demons, felt possessed by them, and behaved bizarrely. Viewing this state as symptomatic, Janet believed there was another state, dissociated from this one, in which Achille could explain his illness (as with the case of Hoek's patient Rika van B.). Evoking this dissociated state through hypnosis, Janet elicited a lucid account of the events that determined the content of Achille's delusional ideation. Rather than being proof of a psychotic disorder, the delusional phenomena and state proved to be symbolic references to a dissociated traumatic experience. The traumatizing event was inarticulable and produced what appeared as a psychotic state. Treatment consisted of neutralizing the emotionally overwhelming event by working through memories of the material using a variety of hypnotic and psychotherapeutic techniques. After one month, the 'demons' were 'vanquished' and disappeared. Achille no longer went into deep hypnotic states, and pathological ideation ceased, indicating resolution of the traumatically-induced dissociation. The HP produced by the dissociated traumatic experience remitted completely, unity of the personality was reestablished, and 3- and 7-year follow-ups indicated Achille was doing well in all respects (p. 3).

The early views of Breuer and Freud (1893/5) on hysteria and HP, which emphasized the traumatic origins of these disorders, were strongly influenced by Janet, as Breuer (1895) acknowledged. Breuer (1895) also pointed to the dream-like nature of HP and to the often rapid alternation of such dreams with normal waking states. He believed that patients experiencing these 'waking dreams' were in a state of self-hypnosis that the French termed 'somnambulism.' Unlike Freud, Breuer believed that such 'psychotic states' could persist for a long time, as exemplified by his famous case of Anna O (reinterpreted by Loewenstein, 1992, as a case of Dissociative Identity Disorder, DID).

The Decline of Hysteria

At the beginning of the twentieth century, interest in hysteria, hypnosis, and HP essentially disappeared. Two factors prompted this rejection. The first was the successful campaign against hysteria as a respectable mental disorder because it lacked an organic basis (Maleval, 1981; Villechenoux, 1968). Babinski (1901, 1909) strongly advocated this position, which led to viewing patients with HP as malingerers or as highly suggestible. While Kraepelin (1919/1971) acknowledged the existence of psychogenic psychosis and of psychotic-like symptoms in hysteria, in contrast to dementia praecox, Bleuler (1911/1950) insisted that HP represented merely the occurrence of schizophrenia in a personality which was premorbidly hysterical. Bleuler's introduction of the term 'schizophrenia' (Bleuler, 1911/1950) as a diagnostic entity encompassing widely divergent mental disorders, and the broad acceptance it gained, was also a major factor in HP's decline (Maleval, 1981; Rosenbaum, 1980).

Only very few authors continued to stress the importance of distinguishing between HP and other psychoses. The German psychiatrist Raecke (1915) emphasized the influence of extreme situational stress in the development of HP. The Dutch psychiatrist Breukink (1923, 1924; cf., Van der Hart & Spiegel, 1993) harked back to the work of Janet, Breuer, and Freud. According to Breukink, HP was often rooted in traumatic experiences, characterized by the patient's high hypnotizability. Therefore, it was readily accessible and treatable by hypnosis.

Although case reports on the successful (hypnotic) treatment of HP should have made differential diagnosis imperative, the all-encompassing label of 'schizophrenia' prevailed, and many authors struggled with the clinical problem of hysteria and of diagnosing psychoses which did not completely fit the diagnostic criteria of schizophrenia (e.g. Carrot, Charlin, & Remond, 1945; Claude, 1937; Mallett & Gold, 1964).

The Return of the Diagnosis of Hysterical Psychosis

After World War II, several attempts were made to revive the concept of HP. In line with Janet's dissociation model, the Dutch psychiatrist Hugenholz (1946) stated that HP can develop in individuals with hysterical characteristics who are exposed to traumatizing events. He argued that patients with HP exhibited a lowering of consciousness, dreaming, fantasizing, staring, inattentiveness, and abulia. According to Hugenholz, the duration of HP may vary from a couple of days to several months. When the psychosis disappeared, other hysterical characteristics could continue to be present.

In France, Follin, Chazaud, and Pilon (1961) returned to the old literature of Charcot and Janet, and the early work of Freud and Breuer. They presented five cases of psychotic and hysterical patients, concluding that the inability to distinguish between HP and schizophrenia often led to 'the most serious therapeutic errors' (p. 282).

In America, the influential work of Hollender and Hirsch (1964) described two dominant characteristics of HP: (i) a sudden and dramatic onset related to a profoundly upsetting event or circumstance and, (ii) duration of less than three weeks. Its manifestations included hallucinations, delusions, depersonalization, and grossly unusual behaviour. They believed that HP most commonly occurred when persons with hysterical personalities encountered difficult life situations. Five years later, Hirsch and Hollender (1969) modified their original position, arguing that HP could be conceptualized in three different ways:

1) as socio-culturally sanctioned behaviour, i.e. behaviour determined by the prevailing belief system in a given culture;
2) as 'appropriation of psychotic behaviour', essentially a conversion process taking the form of psychotic symptoms;
3) 'true' psychosis with disruption and breakdown of ego boundaries, and the surfacing of unconscious material (the only option considered in their first paper, Hollender & Hirsch, 1964).

Langness (1967) criticized the first option above, insisting that HP was common in a wide range of cultures, but would typically be considered abnormal (i.e. not socially sanctioned). He further argued that its presence in many cultures suggested that it might have 'greater utility [as a psychiatric diagnostic category] than has hitherto been supposed' (p. 151). Hirsch and Hollender considered their second option, 'appropriation of psychotic behaviour', as not a true psychosis, but as hysterical simulation. They found it very difficult to accept a psychosis based on conversion (dissociation). This attitude among sceptical physicians of interpreting everything that looked like 'hysteria' as simulation can be traced back to Babinski, who viewed hysterical patients as malingerers; in recent times, this attitude led to the introduction of the concept of 'Factitious Disorder' in the DSM-III (APA, 1980).

Richman and White (1970) considered HP to be associated with aggression, object loss, and anxiety related to death. In line with them, Martin (1971) viewed HP as a response to disrupted object relations, particularly in the case of disturbed marriages. Siomopoulos (1991) described HP as a pattern of regressive activity related to childlike thought and behaviour, and the merging of fantasy and reality, thus joining the old views of Moreau de Tours and other French alienists.

Janet's dissociation model reappeared in the work of Prinquet (1977), who underscored the dissociative aspects of HP, including the splitting or doubling of the personality, 'conversion' symptoms (i.e. somatoform dissociative symptoms), and suggestibility. For Spiegel and Fink (1979), HP usually involved brief and intense periods of psychotic behaviour following severe environmental stress, often with dramatic decompensation and rapid recompensation, in individuals with other hysterical features. Their view that patients with HP are highly hypnotizable (while patients who are schizophrenic and psychotic usually are not) corresponds with Janet's (see also Chapter 14 of this book). Furthermore, they stated that the former have a poor response to antipsychotic medication, but will respond to individual and family therapy, echoing the position of Follin

et al. (1961). Spiegel and Fink (1979) regarded HP as a spontaneous trance state, which they later explicitly considered to be a dissociative phenomenon (cf. Spiegel & Cardeña, 1991; Spiegel, Hunt, & Dondershine, 1988).

Steingard and Frankel (1985) also saw dissociation as being central to the vulnerability of certain highly hypnotizable persons to experience transient but severe psychotic states while immersed in spontaneously occurring trance states. Consistent with Hoek, Janet, and Breukink (Van der Hart & Spiegel, 1993), Steingard and Frankel (1985) believed hypnotherapy to be the treatment of choice. After reviewing both the historical and contemporary HP literatures, Van der Hart et al. (1993) concluded that HP was a traumatically induced dissociative psychosis, which manifested in spontaneously occurring trance states. During these trance states, direct re-enactments of traumatic experiences or symbolic experiences related to the trauma occurred, which were amenable to psychotherapy, particularly hypnosis (see Van der Hart & Witztum, Chapter 19 of this book, for further discussion).

In their study of four cases of HP, Tutkun, Yargic, and Şar (1996) concluded that these patients had DID with long-term histories of dissociative symptoms and prolonged childhood traumatization. In all four cases the HP disappeared spontaneously or after supportive treatment in just a few days. While the patients denied further HP symptoms, careful psychiatric examination revealed that they still had 'amnesias, voices inside their heads, unexplained changes in behaviour and affect, and feeling that there was someone else inside them' (Tutkun et al., 1996, p. 246). This confirms Hugenholz's (1946) observation that other hysterical characteristics may remain even after apparently successful treatment of HP. Tutkun and colleagues believe that HP in DID patients is a result of decompensation after an acute stressful life event and that this decompensation leads to a struggle for control and influence among dissociative parts of the personality carrying frightening, fearful, aggressive, or delusional features, some of which have been dormant for a long time.

Systematic and Empirical Studies

The majority of publications on HP, such as those described above, were confined to conceptual and theoretical issues or to case studies, usually involving just a few cases. However, there have been some attempts to review the literature more systematically. Bishop and Holt (1980) collected all anecdotal accounts and brief case presentations reported in 18 publications and found, in addition to seven cases of their own, another 49 HP patients. These authors proposed the term 'pseudopsychosis' instead of HP; they considered HP an 'ambivalent and ambiguous' term. Bishop and Holt followed Hollender and Hirsh's basic definitions (1964) and suggested the operational criteria in a DSM–III-style format:

A) Predominant symptoms are delusions or hallucinations
B) Absence of derailment of thought and blunting of affect
C) Psychological factors are judged to be aetiologically involved in the symptoms as evidenced by:
    1) Temporal relationship between psychologically meaningful stimuli and initiation or exacerbation of the symptoms

2) Symptoms enable the individual to avoid some activity experienced as noxious
3) Symptoms enable the individual to get support from the environment that otherwise might not be forthcoming, i.e. disability, solicitude

D) At least two of the following that cannot be explained on a medical basis during the patient's life:
1) Visual hallucinations
2) Pains or bodily symptoms suggesting loss or alteration of function (i.e. psychogenic pain or dissociation of sensory or motor system)
3) Memory loss or amnesia
4) Homosexual preoccupation or involvement, or other 'problems' of a sexual nature
5) Histrionic or antisocial personality

E) Does not meet criteria for organic brain syndromes, schizophrenia, or affective disorder.

According to Bishop and Holt, the 49 cases reported in the literature and their own seven cases all fulfilled these criteria. Of the 49 cases in the literature, 39 had hallucinations – 20 (51.3%) visual hallucinations and 21 (54%) auditory ones. Eleven patients (28%) reported both auditory and visual hallucinations. Ten patients (20.4%) were likely to have had an oneiroid (dream-like) state and four (8.2%) had psychotic onset or exacerbation of illness. Information on course was reported for 18 patients. Four were considered chronic, seven were described as demonstrating subacute or periodic courses, and another seven were described as demonstrating an acute course.

There were, however, problems with Bishop and Holt's (1980) study. The sample was not well defined and appeared to be quite heterogeneous. In addition the diagnostic criteria were very broad and probably too inclusive. Bishop and Holt also did not discuss traumatizing events as a major aetiological factor in HP.

In a Swiss study, Modestin and Bachmann (1992) applied a more systematic approach, including a control group and using the method of 'blind' retrospective evaluation of clinical charts. They compared 21 female HP patients with 21 non-hysterical reactive psychosis patients and 42 schizophrenia patients; all patients were first admissions and matched with regard to sex, age, and year of treatment. The patients were originally given 'best estimate' clinical diagnoses according to the ICD-9. Modestin and Bachmann found only 'marginal differences' between patients with hysterical and non-hysterical reactive psychosis, which in a follow-up analysis they felt were explainable by 'the presence of histrionic personality features in the majority of patients with HP' (Modestin, Sonderegger, & Erni, 2001, p. 51). In contrast, however, they were able to clearly differentiate between hysterical (and also non-hysterical reactive) psychosis and schizophrenia.

Compared to those with schizophrenia, patients with HP had a shorter illness duration and experienced more life events in the year preceding the onset of illness, including events of an undesirable and upsetting type (Modestin & Bachmann, 1992). They also stayed in the hospital for a shorter period of time and received lower doses of antipsychotic medications. Characteristically, the HP sample also exhibited more 'theatrical' behaviour, shifting psychopathology, and DSM-III histrionic personality along with fewer delusions and hallucinations than the schizophrenia patients. Modestin and Bachmann (1992) concluded that HP seemed to be identical with reactive (psychogenic) psychosis (as defined in ICD-9), with the only significant difference being the presence of hysterical personality in the former.

Modestin et al. (2001) undertook a follow-up study in order to assess the long-term course of non-affective functional psychosis, including HP, non-hysterical reactive/psychogenic psychosis, and schizophrenia. Forty-eight female patients from the first study (57% of the original sample) were reassessed after an average of 11.6 years. Seventy-five percent were still receiving outpatient treatment, less than half were on antipsychotic medications, and 35% were hospitalized. The patients suffered from few, mostly non-specific, symptoms and were relatively well-adjusted socially. The authors concluded that HP did not appear to be a discrete clinical entity, as it was not distinguishable from reactive psychoses in the short term, or from non-affective functional psychoses in the long term.

HP and Reactive Psychosis

The concept of reactive (psychogenic) psychosis was introduced into psychiatric nosology at the beginning of the twentieth century. Despite controversy about its validity and usefulness, reactive psychoses have remained popular in certain countries, particularly Scandinavian. Many clinicians in the USA and Scandinavia equate the term HP with reactive psychosis, and Hollender and Hirsch (1964) originally recognized a possible relationship between HP and the reactive psychoses.

Like reactive psychoses, the immediate cause of HP is usually a traumatizing or stressful life event. This may (but need not) be the case for Brief Psychotic Disorder or Acute or Transient Psychotic Disorder, as these DSM-5 and ICD-10 categories allow for a possible link to psychological trauma or loss. However, determining what should, or should not, be considered a trauma is not always straightforward. We believe that environmental stressors, such as severe hunger, hypoglycaemia, and extremes of temperature, as well as interpersonal stressors, such as torture or being shot at, are traumatizing enough to produce a post-traumatic stress response (Bilu, Witztum, & Van der Hart, 1989; Van der Hart et al., 1993).

Pitta and Blay (1997) investigated the concepts of reactive and hysterical psychoses as classified in different diagnostic systems – DSM-III-R, DSM-IV, and ICD-10 They examined all patients who had been admitted to a psychiatric inpatient unit in São Paulo, Brazil, and identified patients who met ICD-9 criteria for psychogenic psychosis, reactive psychosis, HP, or hysteria. The case notes of these patients were then re-examined and the patients received diagnoses using DSM-III-R, DSM-IV, and ICD-10 criteria.

A total of 67 cases were identified in which one of the above diagnoses had been met: 27 cases had ICD-9 'hysteria', 26 cases had 'other reactive and not otherwise specified psychoses', 9 were diagnosed as paranoid reactions, and 5 as 'other'. Using the DSM-III-R criteria, 27 cases were diagnosed as psychotic disorder not otherwise specified (NOS), 12 as BRP, and 11 as bipolar disorder. Using the DSM-IV criteria, 21 cases were diagnosed as psychotic disorder NOS, 11 as mood disorder, 7 as brief psychotic disorder without stressor, and 12 as brief psychotic disorder with stressor. Finally, using the ICD-10 criteria, 18 cases were diagnosed as unspecified non-organic psychosis, 12 as mood disorder, 1 as acute and transient psychotic disorder without stressor, and 13 as acute and transient psychotic disorder with stressor. Strikingly, a very low level of agreement (kappa = 0.08) was found between ICD-9 'hysteria' and 'other reactive and non-specified psychoses' and the corresponding categories of DSM-III-R and DSM-IV. Pitta and Blau concluded that, although DSM-III-R provided operational criteria for BRP,

and DSM-IV and ICD-10 provided such criteria for brief or acute psychotic disorder, these categories bore little relationship to the original HP concept.

From our point of view, it is clear that current diagnostic systems do not provide adequate operational criteria to identify HP or its modern equivalent – dissociative psychosis. We would argue that this is the main reason why its validity has not been adequately empirically established.

Integration and Concluding Remarks

Theoretical notions about the symbolic and psychopathological nature of trauma-induced psychosis coalesced a century ago in the concept of hysterical psychosis. Since then, the extant clinical case studies and empirical examinations have not been sufficient to validate the existence of HP as an independent epidemiological and clinical entity. However, as described in this chapter, the extensive and rich clinical experience with this trauma-related disorder from the historical literature suggests that 'the baby should not be thrown out with the bathwater'. Following Van der Hart et al. (1993) and Graham and Thavasothby (1995), we propose to relabel and reconceptualize HP as dissociative psychosis – consistent with Şar and Öztürk (2009) and Van der Hart, Nijenhuis, and Steele (2006).

We have re-examined historical and contemporary cases of HP with particular emphasis on traumatic experiences as a major aetiological factor. We conclude that this disorder can be regarded as a form of traumatic stress disorder with *structural* dissociation of the personality – that is, the existence of *dissociative parts of the personality* – as its dominant feature, thus as a *dissociative disorder* (see Chapter 19 of this book, also Van der Hart et al., 2006). Further, HP can often be observed during crisis episodes in patients with more complex dissociative disorders, such as DID. In the absence of response to antipsychotic medication, psychotherapy (including hypnosis) could provide an effective treatment approach. In some cases, the disorder appears to have developed because a recent traumatizing event also reactivated existing traumatic memories, creating an extreme dissociative reaction. The result may take symbolic forms, such as the subjective experience of being condemned to hell and being tortured by demons. Awareness that the content of traumatic experiences can also appear in symbolic form should alert clinicians not to limit their inquiry to obvious links to traumatic material, but also to thoroughly observe subjects' thought processes and orientation to reality over time. Hypnotic procedures may help clinicians to enter the patient's world and join and utilize the patient's idiosyncratic symbols and cultural symbology to transform this inner world (see Chapter 19 of this book). However, this conclusion is based on only a limited number of contemporary and historical case studies, not on systematic research. Thus, this therapeutic approach is in need of outcome studies conducted under rigorous experimental conditions.

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4

The Role of Dissociation in the Historical Concept of Schizophrenia

Andrew Moskowitz and Gerhard Heim

The contemporary diagnosis of schizophrenia, with its strong emphasis on psychotic symptoms and impaired functioning, is very different from the original concept proposed by Eugen Bleuler, the Swiss psychiatrist (1857–1939) in 1908 (Moskowitz & Heim, 2011). The term, which means literally 'split mind', is often criticized by medical researchers and clinicians, who bemoan the public confusion between schizophrenia and dissociative identity disorder (DID) – previously called multiple personality disorder. They insist that schizophrenia has 'nothing to do with' DID, and limit the 'splitting' emphasized by Bleuler to a fundamental separation of affect and thought (Andreasen & Carpenter, 1993). But as we shall see, Bleuler's concept of 'splitting' means far more than this; he choose the term 'schizophrenia' deliberately because he felt that dissociation was fundamental to the disorder. In this chapter, we will present several ways in which Bleuler's concept of schizophrenia is connected to the concept of dissociation. The extent of this relationship has been poorly recognized until now.

Decades after Bleuler's original ideas were formulated, the German psychiatrist Kurt Schneider (1887–1967) proposed a series of symptoms argued to be highly predictive of schizophrenia – which have come to be called 'Schneiderian' or 'first-rank' symptoms (Schneider, 1937, 1950/1959). These symptoms – certain types of hallucinations, delusions, and disturbances of self – were strongly emphasized in the diagnostic criteria for schizophrenia in the American Psychiatric Association's Diagnostic and Statistical Manuals from 1980 (DSM-III, III-R, and IV; APA, 1980, 1987, 1994), and continue to be emphasized in the 10th edition of the International Classification of Diseases (ICD-10, WHO, 1992; along with the proposed ICD-11, WHO, n.d.). Only in the DSM-5 (APA, 2013) are they somewhat de-emphasized, with the acknowledgement that they lack 'specificity' for schizophrenia. We will present evidence that suggests that some of these symptoms are not only common in dissociative disorders, but are more frequently found in DID than they are in schizophrenia (see Chapter 12 of this book for a more detailed discussion). We will speculate as to why Schneider associated these symptoms so clearly with schizophrenia, when in fact most of them appear to be dissociative in nature.

These two very important and powerful historical links between schizophrenia and dissociation – Bleuler's 'split mind' and Schneider's 'first-rank' symptoms – will be the

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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focus of this chapter; their existence contributes to the growing question of schizophrenia's relationship to dissociation, or even whether schizophrenia should be considered a form of dissociative disorder (see Chapter 5 of this book).

Eugen Bleuler and the Creation of *Schizophrenia*

The first public use of the term *schizophrenia* was in April 1908 – by Eugen Bleuler (1908/1987) at a psychiatry conference in Berlin. It was also used, a few days later, by his associate Carl Gustav Jung (1875–1961), at the first psychoanalysis conference, in Salzburg, Austria.

Eugen Bleuler was born in Zollikon, a small village outside of Zürich. At the time, there was much frustration among the local Swiss who had mentally ill family members because the asylum – Burghölzli – was led by German doctors who did not speak the regional dialect and were ignorant of local customs. Bleuler was affected by this discontent, and developed the desire to deal humanely and with understanding with those who required psychiatric care (Ellenberger, 1970). In addition, his motivation may have been personal. Eugen Bleuler's eldest sister was hospitalized at Burghölzli for the first time when he was a teenager; his family's experience of her treatment, as well as his direct contact with her, was likely decisive in determining his choice of career (Scharfetter, 2006).

In 1886, after only a few years of psychiatric training (including in hypnosis), Eugen Bleuler took the position of chief doctor at the Rheinau asylum – a psychiatric institution on the grounds of a former monastery in Switzerland. For the next 12 years, he spent almost all of his time with the patients he was called on to care for. This not only involved doctor–patient conversations and psychiatric rounds; Bleuler also attended social events with his patients, including dances and nature walks (Bleuler & Bleuler, 1986). Atypical for his time, Bleuler did not marry until his 40s, so had no family to care for.

Like the French psychiatrist-philosopher Pierre Janet (1859–1947), the founder of the dissociation field, whose works he knew well, Bleuler was convinced that there was 'meaning' in the 'madness' experienced by his patients. He always had a pencil and pad with him, and took extensive notes on the things his patients did and said (Bleuler & Bleuler, 1986); these provided the foundation for his ideas on schizophrenia published in his 1911 book, *Dementia Praecox or the Group of Schizophrenias* (Bleuler, 1911/1950).

In 1898, largely because his parents were becoming elderly and could no longer care for his sick sister, Bleuler agreed to take charge of the large Burghölzli hospital near Zürich (Scharfetter, 2006). His sister moved in with him and his new wife, along with their young children, on the grounds of the hospital. Over the next 10 years, Bleuler developed his ideas on schizophrenia, then called *Dementia Praecox*, in close cooperation with Carl Jung, who arrived at Burghölzli for his first medical position in late 1900.

For the first six months, Jung remained largely isolated, reading all that he could find on psychiatry and psychosis, as he was unfamiliar with these areas. He already, however, had a strong interest in dissociation. Influenced by Théodore Flournoy's popular *From India to the Planet Mars* (Flournoy, 1900/1994), which traced the possession states of a medium back to forgotten (or repressed) life events, Jung proposed, for his medical

thesis, a similar study to Bleuler. So, as he began his hospital work, Jung was supervised by Bleuler on the study of a Swiss medium whose séances Jung had attended (she was actually one of his cousins; Ellenberger, 1970). Jung traced back the possession states experienced during the séances to dissociated or repressed parts of his cousin's personality; Pierre Janet's works were quoted throughout the thesis (Jung, 1902/1970).

In late 1902 and early 1903, Jung went to Paris to attend Janet's lectures on the impact of the emotions on the 'mental level' (Janet, 1903) and on his psychopathological investigations at the Salpetrière. Jung was reported to have been 'full of talk about Janet and his theories' when he returned to Burghölzli in mid-1903 (Brome, 1978, p. 83). From then on, Jung, and another cousin, the psychiatrist Franz Riklin, began working on a 'word association test', adapted from Kraepelin. This test involved reading a list of 100 words to a subject, and recording their responses to each word, along with the time taken to respond. Responses typically involved one or two words, and were classified as to whether they were made on the basis of the word's meaning ('light' – 'dark' or 'light' – 'bulb') or sound ('light' – 'bite') (Jung, 1906/1918). After assessing non-psychiatric patients to establish 'norms', they began to test psychiatric patients, and came to believe that unusual responses – odd word choices or unusually long delays in responding – were psychologically important. Jung argued that these 'disturbances' indicated the presence of a 'complex', a concept that came to be of great importance to Bleuler's notion of schizophrenia.

Schizophrenia and *Splitting* ('Spaltung')

Bleuler criticized Kraepelin's *Dementia Preacox*, noting that not all cases began early ('praecox') or ended in full mental deterioration ('dementia'). In a speech to a Berlin psychiatry conference in late April 1908, he proposed *schizophrenia* – literally, 'split mind' – as an alternative because he thought that the *tearing apart* ('Zerreissung') or *splitting* ('Spaltung') of the psychological functions was central to the disorder (Bleuler, 1908/1987, p. 59). A few days later, Carl Jung, in Salzburg, also used the term. In a conference dedicated to Freud's ideas, Jung stated:

> We have borrowed from French psychology a similar concept, which initially was true for hysteria – namely, 'dissociation'. Today, the name means a 'splitting of the self' … Hysteria is primarily characterized by dissociation and because dementia praecox also shows splitting, the concept of dissociation seems to blend into the concept of Schizophrenia (translation by Sünje Matthiesen).

As can be seen in this unpublished manuscript (reviewed at the Jung Archives at ETH Zürich in September 2006), Jung uses the terms 'splitting' and 'dissociation' interchangeably. Prior to April 1908, Bleuler also seemed content to use the term 'dissociation' to describe the same phenomenon. For example, in his paper *Consciousness and Associations* (1905/1918), Bleuler stated:

> (D)issociation of the personality is fundamentally nothing else than the splitting off of the unconscious; unconscious complexes can transform themselves into these secondary personalities by taking over so large a part of the original personality that they represent an entirely new personality (p. 279).

Bleuler claims to have replaced the term 'dissociation' with 'splitting' in his 1911 book because of certain limitations with the former term (and with Otto Gross's 'fragmentation'):

> What Gross understands by his term 'fragmentation' (or disintegration) of consciousness corresponds to what we call 'splitting'. The consciousness, however, cannot fragment itself, but only its contents. Furthermore, we find this splitting in the unconscious as well as the conscious … The term 'dissociation' has already been in use for a long time to designate similar observations and findings. But dissociation also designates more: for example, the constriction of the content of consciousness … [and] may thus give rise to misunderstandings (p. 363).

Importantly, these two quotes illustrate that: (i) Bleuler required a term that allowed for the division of consciousness, not just its contents, and (ii) that he was using 'unconscious' in a way Freud would not (Moskowitz, 2008), as separate from the core personality or ego but not necessarily lacking awareness (as 'new personalities' derived from 'unconscious complexes' could clearly not be entirely unconscious). This can also be seen clearly in the following quote from Bleuler's 1905 paper: 'The complex which has here become unconscious behaves as a dissociative piece of the mind, gathering experiences and making use of them (p. 284)'.

In Bleuler's 1911 book,[1] he explicitly stated that he chose the term 'schizophrenia' because of the importance of 'splitting': 'I call *dementia praecox* "schizophrenia" because … the "splitting" of the different psychic functions is one of its most important characteristics' (Bleuler, 1911/1950, p. 8). A page later, in a section called 'the definition of the disease', he adds 'In every case, we are confronted with a more or less clear-cut splitting of the psychic functions. If the disease is marked, the personality loses its unity; at different times, different psychic complexes seem to represent the personality' (p. 9). Bleuler saw 'splitting' as absolutely central to schizophrenia: 'The splitting is the prerequisite condition of most of the complicated phenomena of the disease. It is the splitting which gives the peculiar stamp to the entire symptomatology' (p. 362).

Schizophrenia and *Complexes*

Bleuler's 1911 definition of schizophrenia continues, '… at different times different psychic complexes seem to represent the personality … one set of complexes dominates the personality for a time, while other groups of ideas or drives are "split off" and seem either partly or completely impotent' (Bleuler, 1911/1950, p. 8). To understand what Bleuler meant by 'complexes', we have to start with Jung.

As noted above, Jung developed his concept of 'complexes' from his word association task experiments from 1903 to 1906 with Franz Riklin, adapting Theodore Ziehen's *Gefühlsbetonter Vorstellungskomplex* or 'emotionally charged complex of representations' (Ellenberger, 1970). Jung (1907/1960) inferred the presence of a complex – clusters of ideas 'cemented' together by a powerful affect (p. 28) and accompanied by 'somatic innervations' (p. 41) – from unusual reactions to stimulus words on the word association test, such as longer delays in responding, odd word choices, or the forgetting of prior responses. He emphasized the relative autonomy of a complex from conscious control, describing it as a 'vassal that will not give unqualified allegiance to its rule' (p. 45) and as a 'being, living its own life and hindering and disturbing the development of the ego-complex' (p. 47). In a later publication, Jung (1934/1960) insisted that

his word association research had 'corroborated' Janet's view of the 'extreme *dissociability* of consciousness' (italics in original, p. 96), and of the possibility of a personality disintegrating into fragments:

> (T)here is no difference in principle between a fragmentary personality and a complex … Today, we can take it as moderately certain that complexes are in fact 'splinter psyches'. The aetiology of their origin is frequently a so-called trauma, an emotional shock or some such thing, that splits off a bit of the psyche (pp. 97–98).

Bleuler's position appears to have been entirely consistent with Jung's, as can be seen in previous quotes where 'complexes' are equated with 'secondary personalities', and in a 1908 paper with Jung on the topic of complexes in dementia praecox (Bleuler & Jung, 1908). In his 1911 book, Bleuler stated that a complex was 'strongly affectively charged so that it permanently influences the content of the psychic process … (and) strives to obtain a kind of independence' (p. 24).

The centrality of complexes for schizophrenia is alluded to in Bleuler's prior book, *Affectivity, Suggestibility, Paranoia* (1906/1912). There, Bleuler (1906/1912) argues that the 'delusions and many other mental symptoms, perhaps I might say all, of dementia praecox can be traced to … complexes associated with emotions' (p. 93; he added that Jung would provide 'proof' of this in his forthcoming *Psychology of Dementia Praecox*, Jung, 1907/1960).

Bleuler's *Schizophrenia* and *Dissociation*

Thus, there is abundant evidence that Bleuler's concept of *splitting* was essentially similar to the contemporaneous use of the term *dissociation* – to mean a division of the personality. The centrality of this concept was the reason for the name *schizophrenia*, and meant far more than a separation of thinking and emotion, as some contemporary theorists have argued (Andreasen & Carpenter, 1993). Secondly, *complexes*, the second essential term in Bleuler's definition of schizophrenia, clearly refers to dissociative parts of the personality. Bleuler also posited a central associational disturbance in schizophrenia, which he called *Lockerung*, which is usually translated as a 'loosening' of associations or a 'relaxation of tension'. Links have been made between this concept and Janet's *reduction in psychological tension* and also between Janet's disorder *Psychasthenia* (Janet, 1903) and Bleuler's *Schizophrenia*, but space does not allow us to consider them here (see Moskowitz, 2006, 2008, and Moskowitz & Heim, 2011, 2013, for a fuller discussion of these issues).

In summary, the original concept of *schizophrenia*, as proposed by Bleuler in 1908 and 1911, was thoroughly infused with concepts of dissociation and the ideas of Pierre Janet. A few decades later, we find another profound connection between schizophrenia and dissociation, though this one, unlike Bleuler's, went unrecognized by its author.

Kurt Schneider and the 'First-rank' Symptoms of Schizophrenia

Kurt Schneider proposed a set of symptoms, which he called 'first rank' but have come to be termed 'Schneiderian' as well, to be highly predictive of schizophrenia. The symptoms, described below, came to have a powerful influence on the diagnostic criteria for

schizophrenia from the late 1970s on. In the following, we describe: (i) how this happened, (ii) the nature of the symptoms proposed by Schneider, (iii) the discovery of their association with dissociative identity disorder, and (iv) possible explanations for Schneider's position.

The Genesis of the First-rank Symptoms

In 1937, Kurt Schneider published a paper called 'Five years of clinical experience at the Research Institute for Psychiatry' (Schneider, 1937), which documented 5000 psychiatric patients admitted over a period of 5 years (1932–1936) to a Munich psychiatric hospital. In the paper, he described the range of diagnoses given, along with his rationale for diagnosis. Of note, this cohort included more women than men (55% / 45%), even more so for those given a diagnosis of schizophrenia (73% female), which were 19% of the total cohort. Schneider commented on this gender imbalance, explaining that 'agitated' men were not permitted to be admitted on his ward before 1932, and that subsequently the referring agencies were slow to modify their practices. This, plus the fact that Schneider (1937) described the women's units as 'almost always overcrowded' (p. 957), but not the men's, makes it likely that his schizophrenia sample consisted of an abundance of *agitated, acute* female cases.

In the paper, Schneider listed a series of 'specific schizophrenic' symptoms that he argued should lead to a diagnosis of schizophrenia 'in all cases' (p. 960) lacking evidence for organic causation. However, he noted that, in a minority of cases, none of these symptoms need be present; in other words, Schneider considered these symptoms to be *sufficient*, but not *necessary*, for a diagnosis of schizophrenia. The symptoms were (Schneider, 1937; in German followed by the standard English translations):

> *Gedankenlautwerden* (audible thoughts), *Stimmen in Form von Rede und Gegenrede* (voices conversing or arguing), *Begleitung des Tuns mit halluzinierten Bemerkungen* (voices commenting on one's behaviour), *körperliche Beeinflussung* (somatic influences), *Gedankenentzug, Gedankeneingebung und -beeinflussung* (thought insertion, thought withdrawal and thought influences/'made' thoughts), *echter Wahn als Beziehungssetzung ohne Anlaß* (delusional perception).

These symptoms have often been divided (for example, Koehler, 1979) into *auditory experiences*, or 'sense deceptions' (the first three), and *passivity phenomena/experiences of influence* (all the rest, except for 'delusional perception'). Later, another symptom, *Gedankenausbreitung* – thought *broadcasting* or *projection* (often considered a *passivity* symptom, but better considered – for reasons explained below – a *genuine delusion*) was added. Schneider apparently believed passivity phenomena to be a consequence of an abnormal 'permeability of the ego-world boundary' in schizophrenia (Koehler, 1979), in which a person experiences 'disturbances of the sense of "I", "me" and "mine", which consist in feeling that what one is and what one does have passed under the direct influence of others'(Schneider, 1950/1959, p. 120).

These symptoms, and Schneider's argument for their importance to the diagnosis of schizophrenia, were repeated in a text he wrote for general physicians, and then in his *Klinische Psychopathologie*, first published in 1950 and translated into English in 1959 as *Clinical Psychopathology* (Schneider, 1950/1959). It was only after this English translation was published that Schneider's ideas came to the attention of English-speaking and international diagnosticians and researchers.

DSM-III and the First-rank Symptoms

In the early 1970s, there was increasing concern that psychiatric diagnoses might be too vague and could not be reliably, or consistently, applied. This was particularly the case for schizophrenia, as several studies had demonstrated that the diagnosis was used in a much broader fashion in the United States than in Great Britain (e.g. Kendell et al., 1971). When Robert Spitzer and two other psychiatrists began developing a set of psychiatric diagnostic criteria specifically for research (the *Research Diagnostic Criteria*, or RDC; Spitzer, Endicott, & Robins, 1975, 1978), they turned to an instrument called the *Present State Examination* (Wing, Birley, Cooper, Graham, & Isaacs, 1967), which heavily relied on Schneider's symptoms for the diagnosis of schizophrenia. Spitzer had been concerned about the vagueness of symptoms described only as *hallucinations* and *delusions*, and was impressed by evidence from Wing that Schneider's more specific symptoms could be assessed reliably (Kendler, 2009). They were incorporated into the RDC criteria for schizophrenia, and later into the DSM-III (APA, 1980). In the DSM-III and DSM-IV (APA, 1994), and also in the ICD-9 and ICD-10 (WHO, 1977, 1992; and proposed ICD-11), these Schneiderian symptoms (particularly voices *commenting* and *conversing* and the *passivity phenomena*) were heavily emphasized. Indeed, in the DSM-IV and ICD-10, only *one* of the first-rank symptoms noted above was required to fulfil the symptom criteria for schizophrenia. Importantly, these symptoms were de-emphasized in the DSM-5, with the admission that they had 'no unique diagnostic specificity' for schizophrenia (but without any reference to dissociative disorders). However, *passivity phenomena* continue to be described as core examples of *bizarre* delusions, defined as delusions which are considered to be 'clearly implausible', 'not understandable' (p. 87), or 'physically impossible' (p. 819; APA, 2013).

First-rank Symptoms in Dissociative Identity Disorder

In 1970, C. S. Mellor published an influential paper in the *British Journal of Psychiatry* on the first-rank symptoms, with detailed descriptions and definitions (Mellor, 1970). Richard Kluft, a psychiatrist with extensive experience with DID (then called 'multiple personality disorder'), thought many of the first-rank symptoms sounded similar to experiences his DID patients reported, and decided to systematically collect data on some of his patients; he did so over a period of 10 years, using Mellor's descriptions and definitions. This resulted in a paper published in 1987 in the *American Journal of Psychiatry*, entitled (somewhat provocatively), 'First-rank symptoms as a diagnostic clue to multiple personality disorder' (Kluft, 1987). In this paper, Kluft (1987) found that his DID patients had, on average, 3.6 Schneiderian symptoms, but that some symptoms were far more commonly reported than others. While most of the symptoms were frequent in his sample of 30 patients (present in 30% to 77% of the cases), three were entirely absent – *audible thoughts*, *thought projection*, and *delusional perception*. Possible explanations for this will be discussed below. Passive influence experiences and auditory verbal hallucinations were common; Kluft explained this by noting that, for many persons with DID, some *parts* of the personality (here called 'personalities') frequently *intruded on* or *influenced* others: '(P)ersonalities (often) state that they have made another see or hear something, influenced another's perceptions, caused a sensation, impulse, or action in some other alter, or taken away the alter's memory' (pp. 297–298).

Kluft's groundbreaking study was followed a few years later by two studies by Colin Ross and colleagues (published in Ross et al., 1990) – one, a large survey of clinicians working with DID patients and, the second, a directly interviewed sample of DID patients in Ross's practice. In both samples, first-rank symptoms were very common, with *thought broadcasting* the least frequent. Ross compared Kluft and his findings to 10 studies assessing first-rank symptoms in schizophrenia; on average, these symptoms were more than 3.5 times more common in DID than in schizophrenia.

Since that time several studies have directly compared persons diagnosed with DID and schizophrenia on the first-rank symptoms (see Chapter 12 of this book). For example, Dorahy et al. (2009) found the symptom of voices *commenting* on one's behaviour to be almost twice as common in DID than in schizophrenia; voices *conversing* among themselves were *five times* more common in DID than in schizophrenia. And a study by Laddis and Dell (2012) found *passivity phenomena* (excluding thought *projection*, which was not assessed), to be more common in DID than in schizophrenia.

Thus, Schneider's first-rank symptoms, with the exception of *thought broadcasting* and possibly *audible thoughts* and *delusional perception*, appear to be considerably more common in DID than in schizophrenia. They also can be easily explained from a dissociation perspective (see Kluft's, 1987 comments above). Why then did Schneider think these symptoms to be predictive of schizophrenia?

Kurt Schneider's First-rank Symptoms and Misdiagnosis

Like Bleuler, Schneider's diagnostic criteria for schizophrenia were fairly broad – more than 19% of his sample received the diagnosis, compared to less than 4% manic-depressive insanity. The only larger category was *Psychopathy and Abnormal Reactions* (33%) which was, unfortunately, not described in the paper. As was common for the time, Schneider used the term *psychopathy* to refer to neuroses or personality disorders.

The most likely explanation for this paradox – that Schneider considered his symptoms to be predictive of schizophrenia but that they are apparently more predictive of DID – is that Schneider's schizophrenia sample included a large percentage of unrecognized highly dissociative patients. Evidence from the 1937 study in support of this includes the following:

1) Schneider's schizophrenia sample, as described above, appears to be quite different from contemporary schizophrenia samples – almost three-quarters female and highly agitated – compared to the more chronic, mostly male (or equally male and female), and more withdrawn (negative symptoms) population found in most of today's schizophrenia studies.
2) There is no clear category for dissociative disorders – for example, no *hysteria* or *hysterical personality* diagnoses are listed. Prior to the diagnosis of schizophrenia, hysteria was the most common diagnosis given to women.
3) The diagnosis of *Rentenneurose* ('Pension' or 'Compensation' neuroses) implies that Schneider held a critical view toward trauma-based disorders. The diagnosis implies a feigning (perhaps unconscious) of symptoms in order to gain money.

These arguments are strongly supported by statements from Schneider's later *Clinical Psychopathology* (Schneider, 1950/1959), where he expresses considerable scepticism about the validity of experiences of multiple personality or identity. In a section

addressing ego- or self-disturbances ('Ichstörungen'), in the chapter on assessment and diagnosis, Schneider writes:

> The experience of identity is never broken and we should be incredulous of data involving [*Angaben*, better translated as 'reports of'] any such lost identity of short or long duration. Multiple personality is equally always suspect [*Schwindel*, literally, 'deceptions']. Above all, 'alternating consciousness' has never won our credence [*nie glaubhaft gemacht worden*, literally, 'has never been presented believably']. By this is meant that one is first A, then B, and that memory of the A period belongs only to A, and that of B, only to B (p. 122).

Schneider then goes on to state that, even in cases of total amnesia (which he insists can only be due to brain injury, not for psychological reasons), the continuity of the self ('Kontinuität des Ich') is always maintained (Schneider, 1950/1959).[2]

These quotes make it clear that Schneider did not believe cases of DID (previously known as 'multiple personality disorder') to be valid. Further, he stated specifically that reports of experiences of 'doubling' (*Verdoppelungserlebnisse*) by psychotic individuals should not be 'taken literally' ('nicht wörtlich verstehen', p. 129, i.e. 'not believed'). Given these attitudes, it is clear that Schneider would not have looked for clinical presentations that would today be called DID, and that persons presenting in this way among the 5000 persons evaluated would have been given other diagnoses, most likely schizophrenia.

So, Schneider's *schizophrenia* sample likely included a significant number of dissociative disorders, which could have experienced many of the first-rank symptoms as a consequence of conflict (manifested by *intrusions* and *withdrawals*) between different parts of the personality. But his sample undoubtedly included some persons (perhaps most?) that would meet today's criteria for schizophrenia. Why would Schneider have thought these symptoms to be highly specific for the *whole group*?

A possible answer to this can be found in Schneider's premise that passivity symptoms were due to problems with the 'ego/world boundary' in schizophrenia. He did not think that these experiences could also occur in persons *without* ego/world boundary problems, but *with* a personality structure containing more than one self, part or agent – since he didn't believe that this was possible. As noted in Chapter 1 of this book, and in Kluft's (1987) paper, almost all passivity phenomena can simply be accurate descriptions by persons with DID of their internal experiences under the influence of another part of the personality. Further evidence for this argument can be found by looking more closely at *thought broadcasting* which, as noted, was *not* in Schneider's (1937) list of symptoms (just why, and when, it was added is not yet known), but is *more* common in schizophrenia than in DID. While thought *insertion* and *withdrawal* can simply be descriptions of internal experiences ('It feels as though my thoughts have been removed by something or someone'), thought *broadcasting*, which is the belief that my private thoughts are known or experienced by others, appears to be more complex. It is much more like a DSM-5 *delusion*, a 'false belief … about external reality' (APA, 2013, p. 819), predicated upon a 'permeability of the ego/world boundary', than the rest of the passivity phenomena. And genuine delusions (unlike most of the passivity symptoms, which are *not* beliefs about 'external' reality) are more common in schizophrenia than in DID (e.g. Laddis & Dell, 2012).

Thus, Schneider may have been correct in believing that 'permeability' of the ego/world boundary was an important sign for schizophrenia; unfortunately, most of the symptoms he thought to be a consequence of this permeability appear to more commonly result from highly dissociative personality structures, such as that which is found in DID.

The Role of Dissociation in the Historical Concept of Schizophrenia

Both Bleuler and Schneider, though in fundamentally different ways, incorporated dissociation into their concepts of schizophrenia; Bleuler, knowingly, and Schneider, apparently unknowingly. While Bleuler clearly recognized the occurrence of dissociative phenomena, which he thought was central to schizophrenia, Schneider very likely overlooked the presence of dissociative disorders in his schizophrenia group, and attributed dissociative symptoms to a 'breakdown' in the self/world boundary. However, in both cases, dissociative phenomena played a major role in the concept and diagnosis of schizophrenia. Thus, dissociation has played an important role throughout the entire history of schizophrenia – a recognized role in the original concept of schizophrenia, but a hidden role today – in all diagnostic systems that continue to emphasize Schneider's first-rank symptoms.

What is the significance of this? At the very least, it implies that almost all research on schizophrenia has unwittingly included a significant subgroup of persons with severe dissociative disorders; as almost no research in this area screens for dissociative disorders, it appears likely that essentially all schizophrenia research has been 'tainted' by the presence of unrecognized dissociative disorders (Steinberg, Cicchetti, Buchanan, Rakfeldt, & Rounsaville, 1994; Yu et al., 2010). Beyond this, the persistent presence of dissociation behind schizophrenia, along with the clear evidence that auditory verbal hallucinations are dissociative in nature (see Chapter 13 of this book), implies that the diagnosis itself may be more closely linked to dissociative disorders than has previously been recognized (but see Chapter 5 of this book). Future research assessing for both psychotic and dissociative disorders will be required before this enigma can be solved.

Notes

1 The book was written in 1908, but not published until 1911; Bleuler updated it slightly before publication (Bleuler, 1911/1950).
2 The English translation (Schneider, 1950/1959) of one sentence from this passage is completely inaccurate, stating: 'continuity of the self is only achieved by inducing a total amnesia' (p. 122). The original German (Schneider, 1950/1959) is 'Selbst bei engelagerten totalen Amnesien bleibt die Kontinuatät des Ich erhalten' (p. 129).

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5

Ego-Fragmentation in Schizophrenia

A Severe Dissociation of Self-Experience

Christian Scharfetter

In this chapter I will propose that schizophrenic syndromes represent a unique type of 'ego-' or 'self-pathology', an ego-fragmentation that in extreme forms could be considered an annihilation of the 'ego/self'. I consider this fragmentation or splitting of the ego to be a special form of dissociation, striking the ego/self along the five basic dimensions of *vitality*, *activity*, *coherence/consistency*, *demarcation*, and *identity* (Scharfetter, 1996, 2003). From this perspective, the schizophrenic syndromes can be thought of as lying on a continuum with other disorders, such as dissociative identity disorder (DID) and borderline personality disorder (BPD), all of which can be characterized as 'non-cohesive' disorders (Kernberg, 1975; Mendelsohn & Silverman, 1987). However, the peculiar rigidity and fragility of the schizophrenic ego, which predisposes it to fragmentation, contrasts with the fluid ego states observed in DID and BPD. This 'ego-fluidity' may protect those with DID or BPD from the extreme fragmentation and deterioration seen in the schizophrenic *syndromes*.[1]

Schizophrenic Syndromes as Self-disorders

Over three decades ago, I started to systematically study the self-experience of schizophrenic patients along with studying their understanding of the relationship between their self-experience and behaviour. From that approach, I developed a system of ego-pathology. Some years later, after studying the historical roots of schizophrenia and the 'dissociation' model (which formed the basis for Bleuler's term), I conceived of two continua: (i) between health and illness, i.e. functional or dysfunctional, and (ii) between the dissociation of certain mental functions and severe ego/self-dissociations, which differed with respect to the extent of fluctuating identities and ego-fragmentation.

Schizophrenic syndromes can be viewed as pathogenetically heterogeneous severe forms of ego-pathology, in which not only temporary dissociation but also permanent destruction of the ego/self can be seen. While 'schizophrenia' should not be considered a nosological entity as such (i.e. manifested by uniform phenomenology, aetiology, course, outcome, pathogenesis, and treatment response), the common

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
© 2019 John Wiley & Sons Ltd. Published 2019 by John Wiley & Sons Ltd.

experience of patients with the schizophrenic syndromes appears to be a disorder of self-experience in its basic dimensions. The clinical presentation is determined by the quantity and quality of the experience and the capacity to cope with it. The syndromes described under the diagnostic term schizophrenia can be conceived as differing expressions of the underlying ego-pathology.

This model of ego-pathology in the schizophrenic syndromes allows us to systematically study the self-experience of these patients, as well as their reactions (e.g., freezing, fleeing, and fighting) and attempted self-treatment strategies.

The Construct of Ego-pathology

One clinically relevant perspective on psychopathology is that of the 'ego/self'. 'Ego' is a term for the self-experience ('I-myself'), whereas 'ego' and 'self' are used differently in various theoretical perspectives. Ego/self (i.e. the consciousness of me/I-myself; James, 1890) is seen as a functional complex evolving from many mental functions, including cognition, perception (and proprioception), sensation, emotion, and memory. All these functions contribute to the awareness of 'I-myself' in waking consciousness. Healthy ego-consciousness means being able to conceive of oneself as a coherent and consistent living subject with a stable but flexible personal identity, delimited from others (non-self), and able to integrate and control one's own thinking, feeling, perceiving, and acting.

Ego-pathology can be understood through the clinical observation of patients usually called 'schizophrenic' and has been explored for more than a hundred years by many psychopathologists (Scharfetter, 1996). In recent decades, this perspective has been utilized primarily by psychoanalytically-oriented authors, particularly in their analysis of narcissistic and borderline personality disorders and the important differentiation between cohesive and non-cohesive disorders (Kernberg, 1975; Mendelsohn & Silverman, 1987).

Clinical Elaboration of Ego-pathology

The first impulse to study ego-pathology came from the clinical and psychotherapeutic work I was doing with schizophrenic patients, who conveyed their self-experience in original and unique ways. When contemplating phenomenological research in this area, I felt that the material recorded should contain as much of the patients' accounts of their self-experience as possible. Of course, I recognized that the final result would consist of the patients' introspection and self-observation, combined with the interviewer's interpretations, and that his interests, perspective, understanding, etc., would influence what he focussed on in the material presented to him. Attempting to comprehend a given subject is unavoidably the result of the constructive building activity of consciousness.

The statements made by schizophrenic patients about their self-experience and the relationship between their self-experience and behaviour was the starting point for the study of ego-pathology. It became clear that the statements could be ordered into five main dimensions, representing qualities of ego-experiences. These five basic

dimensions can be seen as content clusters, and can be designated *ego-vitality* (being alive), *ego-activity* (self-governing), *ego-consistency* (quality and coherence), *ego-demarcation* (boundary), and *ego-identity* (same-ness) (Scharfetter, 1996). The next sections contain descriptions of these dimensions, followed by illustrative quotations from schizophrenic patients.

Ego-vitality

Ego-*vitality* means to be present as a living being. A schizophrenic patient might experience himself as being present, but at the same time assure us that he feels dead. For the person with schizophrenia, the 'cogito ergo sum' of Descartes is not convincing and the fact that he is in dialogue with his therapist is not an argument against his non-being. These experiences often revolve around the experience (or fear) of one's own death, of dying, the non-existence of self, and the experience (or fear) of imminent destruction of the world, of mankind, or of the universe.

- *I am not alive anymore.*
- *That is the core question – do I really exist?*
- *Am I still alive?*
- *I am afraid that I will lose all life.*
- *My ego does not exist any longer.*
- *I do not feel, sense myself as living.*
- *I am rotting.*
- *I do not exist at all.*
- *I am destroyed, the world is destroyed.*
- *I am dying, my heart stopped beating.*
- *I am totally dried up, tomorrow everything is dead.*
- *My face, my cheeks are made of plastic, not living.*

Ego-activity

Disturbances of ego-*activity* involve the lack of, or deficits in, one's capacity for self-determined acting, thinking, feeling, or perceiving. Experiences of being controlled or manipulated by others or by outside powers are common, as well as feelings of being weak or paralysed, or possessed by strange forces. Thoughts, feelings, perceptions appear to be made by others, inserted into, or taken away from the individual (such symptoms are described as Schneiderian or 'first-rank' symptoms in other chapters of this book).

- *I am directed by strange powers.*
- *My thoughts are manipulated from outside myself.*
- *I am not able to control and direct my thoughts and activities.*
- *I feel paralysed.*
- *I feel mechanized.*
- *I am directed by hypnosis, by magic influences.*
- *The devil possesses me, inducing my activities.*
- *It is not me who shouts – that is done by influences on my nerves.*
- *I do not have arms.*
- *My thoughts are made, induced, inserted, directed, taken off, broken.*
- *I am no longer governor of myself.*

Ego-consistency and Coherence

Ego-*consistency* has a broader connotation than *coherence*. It means the quality of self-experience as structured and organized (as opposed to chaotic disorganization and disintegration) into a coherent living being: (i) in self-sense (body experience), (ii) in the harmonious fitting together of mental contents and corresponding feelings, (iii) in the experience of a coherent chain of thought processes, and (iv) in the experience of a coherent, structured, and organized external and internal world. Deficits in this dimension involve themes of the destruction of the consistency and coherence of one's self, body, soul, and the world. Also experienced is disruption of the connection of thinking and feeling, of will, impulse, and fulfilment of action.

- *I feel split apart.*
- *I am an amorphous mass.*
- *I am decaying.*
- *My thoughts and feelings are disintegrated.*
- *My brain is perforated.*
- *I feel myself dissolving.*
- *I feel myself cut into pieces.*
- *I do not feel myself as a unity.*
- *My body is halved.*
- *I am four people.*
- *I am split into pieces.*
- *I am unable to bring together thoughts and feelings.*
- *My soul was taken away and distributed.*
- *My skeleton is broken.*

Ego-demarcation

Intact ego-*demarcation* allows us to be sure of our own private realm of experiencing mental events. Ego-demarcation may be seen as a basic prerequisite as well as a result of a defined/delimited ego-identity. Deficits in this dimension involve themes of uncertainty about, or a weakness or lack of differentiation between, ego, and non-ego spheres. The core experiences are a loss of the private sheltered realm of body-experience, thinking, and feeling, and well as disturbances of the discrimination between inner and outer, personal, and external fields.

- *I do not know my boundaries.*
- *I am unable to differentiate between inside and outside myself.*
- *Parts of the body are outside myself.*
- *My brain is outside myself.*
- *I feel unprotected.*
- *Everything is intruding into me, penetrates me.*
- *What others think is transferred into me.*
- *I cannot keep my thoughts to myself, everybody knows them.*
- *I feel unsheltered and open to every external influence.*

Ego-identity

Ego-*identity* means a pre-reflexive certainty of one's own selfhood despite changes in situations and even in life course. As self-definition, or development of a self-concept, ego-identity includes a definition of one's own limits or boundaries. A disruption of this domain involves a sense of loss of identity, doubts about, or changes in, any aspect of one's identity, including physiognomy, gender, genealogic origin, or biography.

- *I do not know who I am.*
- *Leave me my shape and figure belonging to me, I do not want another body.*
- *I am male and female at the same time.*
- *On the right side I am my father, on the left my mother – and on the nose there is the skin of a cow.*
- *I have to control my face in the mirror, I am afraid it is changing.*
- *I am an animal, a monster. Blood – only half of it is my own.*

Ego-pathology as Self-treatment

In addition to attempting to explain their self-experiences, patients communicate their own interpretation of the functional relation between their self-experience and behaviour, including an awareness that their behaviour is the result of attempts at self-treatment.

A hyperventilating man in a catatonic stupor stated, 'I have to do that to reassure myself that I am alive'. Another, who cut his wrists, said, 'I have to see my blood to be aware that I am still alive'. A patient with stereotyped opening and closing of his hands (parakinesia) said, 'I have to move like that to make sure that I am still able to move intentionally'. A young man bound together his fingers and arms with wooden sticks, glue, and string in an attempt to prevent his body from disintegrating. A young female patient asked the nurse to sew her together, because she felt herself to be flowing out. A man inflicting pain on his hands explained, 'I need to feel pain to be aware of the boundary of my skin'. Some patients control their face in front of a mirror, because they are afraid of their changing physiognomy.

The polymorphous clinical picture of the schizophrenias can be seen as an expression of the 'strenuous effort of consciousness to achieve its own reorganization' (Ideler, 1847, pp. 10–11). Thus, the notion that the subject is attempting to rescue himself from disintegration is an old idea. Langermann and his pupil Ideler (1835) introduced this idea of *self-treatment* into psychiatry.

If the threat of ego-disintegration arises in an immediate, acute, and severe form, with no possibility of defence, avoidance, adaptation, or coping strategies, the clinical reaction is more uniform and occurs at a very basic (psychomotor) level: stupor, agitation, parakinesia, echopraxia, automatism, etc. But if the threat is less severe and/or develops slowly, and if the subject's potential for self-treatment works to some extent, then the clinical presentation is primarily determined by the individual – his personality, history, culture, etc.

Empirical Assessment of Ego-pathology

These dimensions were empirically assessed by means of a 53-item *Ego Pathology Interview Schedule*[2] (Scharfetter, 1996) in 552 patients with schizophrenia, 87 depressed patients, and 25 with borderline personality disorder, diagnosed using DSM-III and DSM-III-R criteria (APA, 1980, 1987). Examples of items from each dimension are:

i) *Identity* ('I repeatedly said to myself – "I am I", or "I am a human being"'),
ii) *Demarcation* ('I become one with other creatures or objects. I lost the sense of my own boundaries'),
iii) *Consistence/coherence* ('I felt torn between two powers/opposites. Opposing feelings or incompatible emotions tore me apart'.),
iv) *Activity* ('I felt overwhelmed, possessed by alien forces, powers, or people'),
v) *Vitality* ('I felt lifeless, dead as a mummy').

Items were scored 'positive' (endorsed by the patient as occurring at least once), 'negative' (never experienced), or 'unsure'. Extensive and rigorous statistical analyses were performed, including multi-dimensional scaling, cluster, and factor analyses, as well as comparison with other established instruments, which confirmed the reliability (kappa = 0.88) and validity of the schedule (see Scharfetter, 1996, 2003).

As can be seen in Table 5.1, patients with schizophrenia consistently reported the highest amount of pathology in all five dimensions, ranging from 52% (percentage of items endorsed positively) for disorders of *ego-identity* to 93% for disorders of *ego-activity*. Patients with borderline personality disorder endorsed pathology in all five dimensions, but at a lower level – ranging from 32% for *identity* to 72% for *consistency*. They also gave far more frequent 'uncertain' answers. Those with depression reported only high levels of *activity* pathology, which, along with their *vitality* scores, were correlated with the severity of depression as measured by the Hamilton Depression Scale (Scharfetter, 1996). Patients from each diagnostic group could be distinguished from the others on the basis of scores on the ego-pathology dimensions, but the schizophrenia group and BPD group were more similar to each other than to the depressive group.

In addition, discriminant function analysis revealed that the three groups had differing patterns of ego-pathology. Schizophrenic patients, with high levels on all five dimensions, experienced a characteristic type of disordered ego-activity – to be directed by outside forces in their thinking, movements, and actions. Borderline personality

Table 5.1 Ego-pathology dimensions in the three diagnostic groups.

Ego-pathology	Schizophrenia N = 552	Borderline PD N = 25	Depressed N = 87
Identity (%)	52.0	32.0	2.3
Demarcation (%)	84.8	44.0	26.4
Consistency (%)	92.2	72.0	31.0
Activity (%)	93.1	56.0	82.8
Vitality (%)	70.6	48.0	36.8

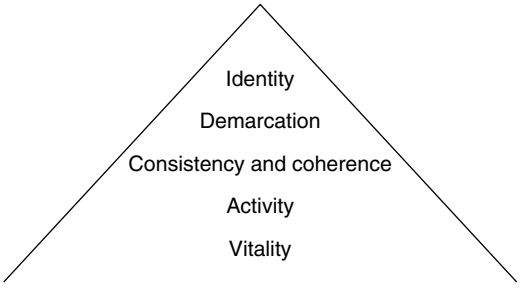
Adapted from Scharfetter (1996).

disorder patients reported mostly disorders concerning consistency and demarcation, but rarely signs of disordered identity, while depressed patients mostly reported reduced activity and vitality.

A Hierarchy of Dimensions of Self-Experience?

The five basic dimensions can be conceived as interrelated, though each dimension may have a relative independence. Although most schizophrenic patients manifest disorders in all dimensions of ego consciousness (61.6%), or all but one 'identity' (25%), one can find some subjects who report disorders on only one dimension (e.g. vitality, identity) or on two (e.g. activity and identity, or consistency and demarcation).

The dimensions can be conceived of as a hierarchy, as depicted below.



Vitality, the certainty of being alive, appears to be the foundation of all other dimensions. Accordingly, a severe disorder of ego-vitality – the experience of being dead or in the process of dying – may impact other aspects of ego-consciousness. The patient may either fall mute and immobile (mutism and stupor) or he may be totally engaged in self-treatment attempts to regain the lost feelings of being alive – by forced breathing, blood-letting, or other forms of self-injurious behaviour. On the other hand, a clinician may see patients with various disorders of other ego dimensions who never suffer a loss of ego-vitality.

Activity may be seen as the second basic aspect. To experience oneself as active contributes to the feeling of being alive. Loss of vitality results in disorders, even paralysis of activity. But *activity* disorders may be present in patients who do not experience *vitality* deficits. This can be seen in patients who report being influenced in their thought processes or movements (automatism, echophenomena), but who do not experience a loss of vitality.

Vitality and activity, together, allow the development of ego-consistency and coherence – the human quality of being one self in one body, with organs, psychic self-awareness, and a coherence of all the elements that contribute to the sense of self. Further, awareness of coherence and consistency appears to be a prerequisite for clear self-delimitation and the establishment and recognition of ego boundaries. Therefore, disorders of ego-consistency and demarcation are often found together.

The development of ego-identity is based on the preceding ego-dimensions. Only with a firm foundation of ego-vitality, activity, consistence, coherence, and boundaries can a personal, individualized, self-identity in its very basic aspects (genealogy, biography, gender, physiognomy, capacity, and social function) manifest itself.

Ego-Fragmentation, Association and the Dissociation Model

While the construct of ego-pathology helps us to understand the internal self-experience of persons with schizophrenia syndromes, I came to realize on both clinical and historical grounds (i.e. my historical study of Eugen Bleuler; Scharfetter, 1995, 2006), that the concept of dissociation described well the nature of the ego-fragmentation experienced by these persons, as well as the relation between schizophrenia and other *non-cohesive* disorders, such as borderline personality disorder and dissociative identity disorder.

The term 'association' is generally taken to mean both the *action* of combining or linking something (for a common purpose) and the *result* of this process of binding or linking together. Implicit in this is a question about force – what is the synthetic force that allows cohesion and integration? Of course, neither the process of associating something nor the synthesizing force can be seen – they are not objects of direct observation. Even the result of the associative process cannot be observed directly. We only conclude from certain 'normally expected' or deviant behaviours, and/or from verbalized self-experiences (e.g. 'I am dead, paralysed, directed by outside forces, dissolved, rotting, experiencing an identity change, etc.'), that the conditions for adequate functioning are no longer there – i.e. disconnected, dissociated, destroyed.

Thus, the term 'dissociation' has come to mean that certain mental functions, which are assumed in Western cultures to normally be interrelated, connected, or integrated, have become separated (in some sense) from each other. The concept of dissociation derives from nineteenth century association psychology with its mechanistic view of the human mind. The mental field was thought to be composed of different elements, such as perception, action, emotion, sensation, and memory, which, in combination, allowed the construction of I/me consciousness (I-myself). In certain conditions (such as under hypnosis, or after a trauma or psychological 'shock'), these elements could separate, resulting, for example, in trance states, lack of continuity of memory, non-neurological paralyses, or even a change in the personality (Janet's 'successive existences'/multiple personality/dissociative identity disorder). Around 1900, the dissociation model for interpreting a wide range of mental disorders was in full bloom, and was proposed by over a dozen authors in the nineteenth and early twentieth century to be *the* fundamental mechanism underlying psychoses, similar to what Bleuler called, in 1908, *schizophrenia*. Indeed, at the time Bleuler coined his term, there were at least four alternative, competing, names for *dementia praecox* which drew explicitly on the dissociation model: Wernicke's *Sejunctionspsychose* ('dissociation psychosis'), Otto Gross's *Dementia sejunctiva* ('insanity of dissociation'), Stransky's *Dissoziationsprozess* ('process of dissociation'), and Zwieg's *Demenia dissecans* ('insanity of dissociation') (Scharfetter, 2001).

The dissociation model came to be used indiscriminately at the end of the nineteenth century (a pattern that may have re-emerged in the last decade of the twentieth century). In both time frames, outside the purview of mainstream, biologically oriented, psychiatry, the concept of dissociation began to be defined more and more loosely and broadly, leading to, in my opinion, an over-diagnosis of dissociation-based disorders. Dissociation was applied as if it was a descriptive item and not an instrument to interpret certain psychological as well as psychopathological phenomena.[3]

The opposite problem, however, occurred in the neo-Kraepelinian psychiatry movement, which became dominant in the second half of the twentieth century. While strongly focussed on schizophrenia, the exponents of this movement (the key architects of the DSM-III, DSM-III-R, and DSM-IV) forgot that Bleuler's decision to call Kraepelin's dementia praecox *schizophrenia* came from the idea that certain psychoses could be interpreted by the process of dissociation – derailment, splitting, dissolution of the ego/self.

Dissociative Mechanisms: What and Where?

Where does dissociation take place? What dissociates, or is dissociated, intermittently or permanently, fluctuating or stable? The process of 'loosening of association', central to Eugen Bleuler's (1911) concept of schizophrenia, which was used by him on the basis of the then flowering association psychology, can be inferred from a multitude of phenomena within a psychopathology framework, but can also be seen in various special states of consciousness within Western and other cultures (e.g. trance in shamanism, meditation, ecstasy, religious, and other emotion-laden states).

Isolated Dissociation of Particular Mental Functions

We may consider many special states of consciousness (with or without changes of identity) to be dissociative, since there is a reduction or loss of a particular function (motor, sensory, memory, etc.). These would include shamanic trances in which the person is believed to gain a capacity to heal or to influence divine powers, or tantric trances in which a change of gender and relation to spiritual forces, even transitory presentation as a representative of God(ess), is experienced. In the cultures in which such activities are encouraged they are not seen as pathological and, indeed, we should be very cautious to view them as such.

Dissociation in Dissociative Identity Disorders

In cases of altered or multiple personality, currently called dissociative identity disorder (DID; not an adequate term, because much more than identity is altered), the clinician observes a change of appearance and behaviour, in the sense of a fluctuating dominance of various, opposing, contradicting, and extremely different 'personalities'. However, because of their unstable, impermanent, and functionally inefficient nature, not representing the whole person, this presentation is more accurately referred to as *subpersonalities* or *subselves*. The clinical presentation results from the fluctuating dominance of the subpersonalities that, however, remain *in themselves* coherent and rarely fall apart or fragment. They oscillate between extremely varying emotional states, expressing degrees of aggression, anxiety, self-harm, suicidality, etc. There are also sometimes hallucinations and apparent delusional ideation.

Thus, while one may observe in dissociative identity disorder extremely fluctuating and sometimes rather strange behaviour, one does not see evidence for a breakdown of the central controlling authority that we call ego. Only rarely does the person with

dissociative identity disorder experience the type of ego-disturbances that persons with schizophrenia often report, such as an imminent decay of their personhood, or feelings of being dismembered, or of being directed by external forces (but see Chapters 4 and 12 of this book for a discussion of similar experiences in dissociative disorders), or experiencing a loss of boundary, or a loss of self-directed behaviour. When this does occur, it often indicates a transition into a schizophrenic syndrome. Such cases are not too frequent – dissociative identity disorder usually does not end in schizophrenic syndromes. I can only speculate why this is so. I assume that a highly unstable and fluctuating ego-self is less disposed to ego-fragmentation – the most severe form of dissociation. It is even possible that it is the very instability or fluctuating nature of the ego-self in dissociative identity disorder that protects it from fragmentation (i.e. is schizo-*preventive*). This would mean that the precondition for a *schizophrenic* dissociative ego-disorder would be a more rigid ego, disposed for fragmentation rather than for fluctuation. One can imagine schizophrenic syndromes as *glass* and dissociative identity disorder as *quicksilver*: the rigid glass fragments split apart and do not re-assemble easily, whereas the quicksilver glides smoothly apart into globes, i.e. little wholes, but quickly unites without splitting apart.

The Continuum of Dissociative Mechanisms: The Spectrum of Dissociation

One can conceptualize a dissociative continuum between healthy functioning on one pole and the pathology of the ego/self manifested in schizophrenic syndromes on the other. One possible version of this is illustrated in Figure 5.1.

Dissociation of subpersonalities ('little wholes') is different from the schizophrenic syndromes. In cases of dissociative identity disorder, there is a struggle between different subpersonalities, but mostly there is no breakdown, dissociation, or decomposition of the central ego/self complex in its basic dimensions – dissociation leading to ego-fragmentation and annihilation. I consider this dissociation of the ego to be the most severe form of dissociation of mental functions, because it strikes the central organizing, integrating functional complex of ego/self that we need to psychologically survive. In schizophrenic ego-fragmentation there are different degrees of destruction, the most severe being ego-*devitalization*, which equals psychological annihilation. And there are varying 'sizes' of the residual ego, which has important implications for the possibility of self-treatment efficacy and chances for remission.

On one pole of this continuum are the useful dissociative processes that allow an individual to function adequately even in difficult life situations (particularly traumatic ones like abuse and torture) without breaking down. On the other pole are the most severe forms of dissociation – the splitting, fragmentation, and dissolution of the ego/self, leading up to psychological annihilation. In between, I place dissociative identity disorder (labelled multiple personality in the figure above). Most such cases survive without decompensation of the whole personality. But I have seen 'multiples' end up in a total chaotic psychotic state with no apparent subpersonality, even no reporting ego-authority, with significant and productive psychopathology (even first-rank symptoms). They lose their identity, even their sub-identity, and thus merge into schizophrenic syndromes.

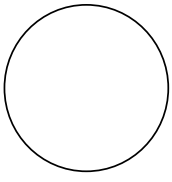
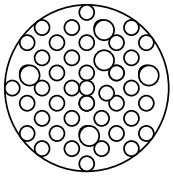
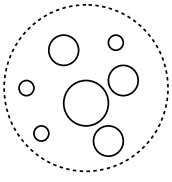
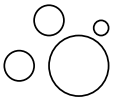
Ego (Experienced identity)	Cohesive  Integrated	Cohesive  Integrated, but with many personality facets	Cohesive  Integrated, but with loosening of the cohesion of subselves	Multiple  Multiple personality	Fragmentation/ annihilation Schizophrenia
Psychopathology	–	–	Possibly +	++	+++

Figure 5.1 The continuum of dissociation.

The Repatriation of the Schizophrenic Syndromes into the Field of Dissociative Disorders

Utilizing the dissociation model, we have to differentiate between disorders based on weakness and a breakdown in which the individual remains *cohesive* (i.e. depressive, anxiety, or phobic syndromes), and ones in which the various forms of dissociation become manifest (i.e. *non-cohesive* disorders – schizophrenia, dissociative identity disorder, borderline personality disorder). We have explored what mental functions dissociate and to what degree and duration. On the one pole are the unstable, fluctuating dissociations of isolated functions (memory, perception, motor function, states of consciousness). On the other pole is the dissociation of the ego/self of schizophrenia. The consequence of this dimensional concept is that the schizophrenic syndromes can be repatriated back into the spectrum of disorders with which they were associated in the beginning, 100 years ago – those which can be interpreted by a dissociation model (Scharfetter, 1998, 1999a, 1999b, 2001).

The Therapeutic Approach: Ego-reconstruction

The dissociation model focuses on the basic deficits of coherence, synthetic capacity, and stability of the self system – and makes us aware of the therapeutic needs of such patients – ego-synthesis, consolidation, and stabilization (including specific therapeutic strategies, such as body-image reconstruction; see Scharfetter, 1995, 1999c) – or, in the most severe destruction of the ego, to learn to cope better with the remaining ego-potential.

Notes

1 While the term 'schizophrenia' or 'schizophrenic' will sometimes be used, schizophrenic 'syndromes' more accurately conveys my position, namely that schizophrenia consists of a group of syndromes demonstrating a particular type of 'ego/self-disorder', which arises from various aetiological factors and pathogenic pathways.

2 The schedule (fifth version) consists of the five basic dimensions listed above, along with questions on *overcompensation* (i.e. primarily grandiose beliefs and delusions), abnormal *body experiences*, *thought disorders* (primarily delusions about thoughts being broadcast, withdrawn, etc.), and *psychomotoric behaviour*. Only the five 'core' dimensions, consisting of the first 23 items, are discussed here. The schedule (in the appendix of Scharfetter, 1996) is available in six languages (English, German, French, Italian, Spanish, and Portuguese).

3 This remains a problem, as the criteria for diagnosing dissociation continues to be a topic of considerable debate (see Chapter 1 of this book). Some authors develop diagnostic monomania and see 'signs' of dissociation everywhere. Such inflation of the concept makes it vague and useless. Fluctuations of emotions or in states of consciousness do not necessarily indicate dissociation. Nor do reductions of vividness of self-experience (depersonalization) or of the environment (derealization) always indicate dissociation. Further, the projection or projective identification of one's own aggression onto another person, or externalizing it as evil spirits in the environment, is not a split/dissociation, because both mechanisms take place in one consciousness.

We must be cautious not to fall into over-diagnosing dissociation. We should reflect also on our implicit supposition that the healthy individual should represent an ideal of integration, unity, synthesis, and wholeness. This is, in fact, a typical illusion of Western anthropology. In indigenous cultures, esp. shamanic societies, a polypsychism (i.e. many selves) prevails. Even in Western culture, some are aware of the many facets of personality: Novalis (1968) speaks of *inner plurality*, Ornstein (1989) of *multimind*, and I myself of *polyphrenia* (in contrast to *schizo*phrenia). The manifestation of divergent personality features in various situations does not indicate dissociation.

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6

From Hysteria to Chronic Relational Trauma Disorder

The History of Borderline Personality Disorder and Its Connection to Trauma, Dissociation, and Psychosis

Elizabeth Howell

For well over a 100 years, a diagnostic stew of trauma-related 'diseases' and syndromes has been simmering. A range of existing and proposed diagnoses, including hysteria, simple, pseudoneurotic, and ambulatory schizophrenia, dissociative identity disorder (DID), 'Other Specified Dissociative Disorders' in the DSM-5 (APA, 2013), borderline personality disorder (BPD), and chronic and complex post-traumatic stress disorder (PTSD), have all been thrown into the pot at different times, resulting in recombinations and blendings of various ingredients. Currently, diagnosticians and theorists are modifying the recipe, and seasoning the stew in light of current scientific knowledge and theories; it may soon be ready to serve. But the proper name for the dish, currently *borderline personality disorder*, is still a matter of some controversy; I, along with Blizard (Chapter 23 in this book), propose that it be changed to *chronic relational trauma disorder* (CRTD), as we believe that chronic relational trauma is the key ingredient for understanding this disorder. Treatment, then, should be based on this understanding. In this chapter, I will explore the changing meanings of this diagnosis from both historical and theoretical perspectives.

Historical Overview

The confusion regarding the ingredients began with the study of hysteria. Janet and Freud (early in his career) both deemed trauma and dissociation to be central to the aetiology of hysteria. However, over time, the term 'splitting' replaced the term 'dissociation' in most psychoanalytic literature, and the early emphasis on trauma and dissociation was disregarded or lost. Soon, hysteria was replaced as the disorder *de jour* by schizophrenia. By the 1950s and 1960s, borderline conditions were identified and related to schizophrenia, only to be later assigned their own special place, described as borderline personality organization (BPO), a cluster of disorders that was between neurosis and psychosis, but equivalent to neither of these (Kernberg, 1975). Finally, and most recently, 'borderline' has begun to be considered in relationship to trauma and dissociation.

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
© 2019 John Wiley & Sons Ltd. Published 2019 by John Wiley & Sons Ltd.

Hysteria and Dissociation

Hysteria ('wandering uterus' in ancient Greek) was the term used in the nineteenth century, notably by Jean-Martin Charcot, Pierre Janet, and Sigmund Freud, to cover a range of problems in living (primarily in women), including what we would now call dissociative disorders, somatoform disorders, BPD, PTSD, and some forms of psychosis. Psychoanalysis began with the study of hysteria and dissociation (*Studies on Hysteria*; Breuer & Freud, 1893–95) and many of Freud's early writings focused on the traumatic aetiology and dissociative features of hysteria. Indeed, some have argued that Breuer's famous patient, Anna O. (Bertha Pappenheim), as well as some of the patients Freud described in *Studies on Hysteria* 1893–95), may have had DID (Ross, 1989).

However, it was Janet, a few years before Freud, who first expounded the link between traumatic memories and dissociation to explain the symptoms of hysteria (Van der Kolk & Van der Hart, 1989). Traumatic experiences and the emotions they evoked ('vehement emotions', in Janet's words), which could not be mentally and emotionally assimilated, became split off from ordinary consciousness and operated 'subconsciously' (the term he preferred to 'unconsciously') and autonomously; 'Things happen as if an idea, a partial system of thoughts, emancipated itself, became independent and developed itself on its own account' (Janet, 1907, p. 42). In his 1889 manuscript, *L'Automatism Psychologique*, Janet described psychological automatisms, which were subconscious phenomena split off from voluntary control and automatically enacted. He related automatisms to fixed ideas, or split-off volatile thoughts or images connected to traumatic memories that continue to intrude upon and influence behaviour, consciousness, moods, affects, and perceptions. Janet used the words 'désagrégation' and 'dissociation' to describe the separation of aspects of experience such that some of it was rendered subconscious. Janet's influence on the theories of his contemporaries (such as Freud, Jung, and Bleuler), as well as those who wrote later, while not always noticed or acknowledged, has been considerable (Ellenberger, 1970; also see Chapter 4 in this book).

Splitting and Dissociation

In their 1895 book, *Studies on Hysteria*, and notably in the first chapter, 'Preliminary communication on the psychical mechanisms of hysterical phenomena' (first published in 1893), Breuer and Freud used the word 'splitting' (as in 'splitting of consciousness' and 'splitting off'). Referring to hysteria, they wrote:

> The longer we have been occupied with these phenomena, the more we have become convinced that the *splitting of consciousness … is present to a rudimentary degree in every hysteria, and that a tendency to such a dissociation … is the basic phenomenon of this neurosis.* In these views we concur with Binet and the two Janets (1895, p. 12; italics in original).

After 1897, Freud, for the most part, stopped using the word 'dissociation.' However, he continued to write about dissociative processes throughout his career without using the word 'dissociation,' typically employing the term 'splitting.' (See Howell, 2005, 2016 for a description of different models of dissociative structure and processes in Freud's work.) Until recently, the great majority of psychoanalytic writers (e.g. Fairbairn, Winnicott, Klein, and Kernberg) have followed in this tradition, using the term 'splitting' rather than 'dissociation.'

Melanie Klein provided the foundation for using the word 'splitting' to refer to good/bad divisions of aspects of experience of self and other (later employed by Otto Kernberg and his followers as the hallmark of BPO, in describing it as a primitive defence against anxiety: the splitting of objects into idealized and persecutory ('good' and 'bad'), with a corresponding split in the ego. In his writing on the schizoid dilemma, Fairbairn (1952) insisted that psychoanalysis turn 'back to hysteria' (that is, to dissociative psychopathology, instead of employing 'neurotic' superego-based psychodynamics) in order to understand schizoid (i.e. 'split ego') phenomena. Fairbairn believed that splitting structured the personality, a result of traumatic experiences which are ubiquitous and unavailable to consciousness; because of this, he believed that we are all, to some extent, schizoid – that the schizoid condition is the human condition. It is important to note, however, that Fairbairn's use of the words 'split' and 'splitting' continued Klein's 'good/bad' and 'opposites' emphasis. His *sub-egos*, the *libidinal* ego and the *anti-libidinal* ego, were opposites in affect and intention. It is because of the reliance on splitting (in the sense of opposites) which both conditions have been assumed to have in common, that 'borderline' and 'schizoid' have often been linked in the psychoanalytic literature.

After Freud renounced his 'seduction' (or 'trauma') theory in 1897, and turned his attention to Oedipal psychodynamics, there was little explicit attention to dissociation and dissociative disorders for most of the subsequent century. Later, hysteria became recategorized as traumatic neuroses, somatoform disorders, and conversion disorders. This left many with dissociative disorders to be categorized as schizophrenic, a term introduced by Eugen Bleuler.

Schizophrenia

Since borderline personality disorder was, for some time, considered related to schizophrenia, it is illustrative to briefly consider the relationship between dissociation and schizophrenia, covered in more detail in several other chapters in this book (see Chapters 4, 11 and 12 of this book, as well as Moskowitz & Heim, 2011). Bleuler (1950/1911) understood dissociation, and the splitting of various functions of mind, as a central dynamic for the patients that he called *schizophrenic* (which meant 'split mind'), many of whom would today be considered dissociative. This tradition continued in some later writers such as Harold Searles, who wrote on schizophrenia in the 1950s and 1960s, and R.D. Laing, whose book, *The Divided Self*, was first published in 1959. Both described many cases of 'schizophrenia' as involving overt switching of identity states – clearly cases of DID. For Harry Stack Sullivan, writing in the mid-twentieth century, the term 'schizophrenic' included a broader group than those who would generally be classified as schizophrenic today, and Sullivan emphasized dissociation as a cardinal defence against anxiety not only for people considered schizophrenic but for everyone. Despite the now-prevailing biogenetic hypothesis of schizophrenia, I believe the aspects of dissociativity first noted by Bleuler are still relevant to understanding schizophrenia.

On the Border: The Schizophrenia Spectrum

Before the advent of the borderline category, the primary division in psychopathology was between neurosis (understood as manifestations of superego problems) and psychosis (the ego's loss of contact with reality). While in the latter part of the nineteenth century, some patients were categorized as lying in a 'borderland' between the two

(Rosse, 1890/1986), it was not until the mid-twentieth century that the term 'borderline' was introduced to demarcate this new domain of psychopathology. Borderline personality was initially understood in terms of the schizophrenic spectrum. One reason for this was that borderline patients tended to have psychotic-like symptoms in 'unstructured' situations, such as projective tests, as well as in situations of interpersonal stress or ambiguity (as the title of the book by Kreisman & Straus, 1989, *I hate you – Don't leave me*, so well describes). Diagnoses previously associated with schizophrenia, including Bleuler's (1911/1950) 'simple' schizophrenia, 'pseudoneurotic schizophrenia' (Hoch & Polatin, 1949/1986), 'psychotic character' (Frosch, 1964/1986), 'as-if' personality (Deutch, 1942), ambulatory schizophrenia, and schizotypal personality, were recategorized as borderline. These classifications referred to people who appeared to be neurotic, but were assumed to have a schizophrenic or psychotic 'core'. Nonetheless, unlike schizophrenic patients, they generally had good 'reality testing'.

Through the 1960s, 'borderline' often meant borderline schizophrenia; gradually, however, the concept became differentiated from schizophrenia (Stone, 1990). For a while it was considered a rubbish bin or wastebasket category (Millon, 1981). At the time psychoanalysis was the primary mode of treatment, and borderline patients were also differentiated from neurotic patients because (it was claimed) that they did not typically succeed in treatment (McWilliams, 1994). With the advent of object relations theories and an increased understanding of the power of introjects, more effective treatment became available for borderline patients (Kernberg, 1975; McWilliams, 1994). Soon 'borderline' gained the status of a separate category of psychopathology, with its own symptoms, psychodynamics, and characteristic defences.

However, some of those involved in the discussion of the 'borderline' diagnosis in this period stressed the importance of affective disorders and affect dysregulation in relation to BPD. Stone (1990) noted that a high percentage of patients diagnosed as borderline were also diagnosed with an affective disorder (p. 68). In support of his view, he, like Kernberg, emphasized the importance of aggression in people with BPD:

> The fate of the affectively ill borderlines, many of whom … may best be regarded as attenuated cases of MDP (manic-depressive psychosis), seems inextricably bound up with the attribute of *aggressivity*. The quintessential borderline – that is, the bipolar II, impulsive, histrionic, labile, suicide-gesture-prone, rageful patient – shows aggressivity in all its forms (p. 72).

Borderline Personality Organization and Splitting

Even among differing psychoanalytic theorists, it was generally agreed that borderline personality derived from derailments in the pre-Oedipal period, earlier than what had been considered typical for neurosis. Kernberg (1975), whose thinking was influenced by Klein's, outlined a specific conceptual underpinning for what he called borderline personality organization (BPO). He emphasized that BPO had a stable but pathological personality organization with characteristic symptomatology and defences, underlying rage, and 'oral' neediness, and pathological internalized object relationships. He argued that BPO underlay most character pathology, including BPD, with the same set of defences, involving splitting, primitive idealization, denial, omnipotence, projective identification, and devaluation.

Kernberg (1984) viewed splitting as a 'primitive form' of dissociation (p. 13). But he used the term to describe dichotomous and alternating aggressive and libidinal ego-states. According to Kernberg, the primary purpose of splitting was to preserve the libidinal (the positive) from contamination by the aggressive (the negative). He emphasized the problems posed by excessive aggression, which contributes to splitting, and as a result to the 'stable instability' (McWilliams, 2011; Millon, 1981) so characteristic of borderline persons. Operating together, these defences and pathological object relationships lead to certain defects, such as identity diffusion and ego weakness.

In contrast to Kernberg's emphasis on splitting, Adler (1985) proposed his 'insufficiency theory' – that borderline patients had insufficient internalization of soothing introjects, and a resultant deficient capacity to allay separation anxiety. Masterson (1976) delineated a borderline dilemma of panic at interpersonal closeness because of a fear of engulfment, combined with fear of abandonment when alone. In general, the psychoanalytic theorists were emphasizing splitting and/or the terror of abandonment and aloneness, phenomena that are consistent with the effects of abuse and severe neglect.

Trauma, Dissociation and BPD

In contrast to the earlier presumption of derailments in the pre-Oedipal period, BPD is increasingly being understood as an outcome of trauma (Gunderson & Chu, 1993; Herman, 1992; Howell, 2002; Kroll, 1993; Putnam, 1997; Ryle, 1997; Zanarini, 1997). Current research on BPD has found both abuse and neglect to be highly significant risk factors (Zanarini, 1997). Difficulty with affect regulation, recognized as an essential component of BPD, is also among the key signs of PTSD (Schore, 2003). As Schore (2003) states, 'It is well established that the loss of the ability to regulate the intensity of affect is the most far-reaching effect of early traumatic abuse and neglect' (p. 267). Herman (1992) and Van der Kolk (1996) observed that concepts of traumatic stress and PTSD, modelled on combat fatigue, rape, and disaster, were not specifically adapted to the psychological problems of those who have endured prolonged and repeated trauma, especially at an early age. The symptom picture of this latter group, which Herman called 'Complex PTSD', involves damage to relationships and identity, potential for revictimization, and emotional dysregulation. A working group for the Diagnostic and Statistical Manual of Mental Disorders, fourth edition, of the American Psychiatric Association, termed this group of symptoms 'Disorders of Extreme Stress Not Otherwise Specified' (DESNOS; Luxenberg, Spinazzola, & Van der Kolk, 2001). DESNOS involves alterations in: (i) the regulation of affect and impulses (e.g. self-destructive behaviour, dyscontrol of anger), (ii) interpersonal relationships and work, (iii) self-perception, (iv) attention and consciousness (dissociation), (v) somatic functioning (i.e. somatization), and (vi) systems of meaning. Confirming the importance of this new designation, McLean and Gallop (2003) found a highly significant relationship between complex PTSD and BPD, suggesting that they were simply different terms for the same condition. However, newer research associated with the development of ICD-11 (Cloitre, Garvert, Brewin, Bryant, & Maercker, 2013) has found only limited overlap: 'the different symptom profiles that describe PTSD and complex PTSD are associated with different subgroups of individuals, different levels of impairment, and different risk factors (trauma history)' (p. 9). Contrasting complex PTSD and PTSD, these authors suggest that chronic trauma is more predictive of complex PTSD; as one might expect, there

was greater co-morbidity of BPD with complex PTSD (33.9%) than there was with PTSD (15%). However, they argued that PTSD and complex PTSD could also stand alone as diagnostic groups without comorbid BPD.

This new research underscores how complicated changing nosology can be – especially in the area of relational trauma. As McWilliams (2011) notes, 'It is probable that … borderline psychology is not a single entity and is multi-determined, like most other complex psychological phenomena' (p. 54). The proposed definition for complex PTSD in ICD-11, as basically a subtype of (simple) PTSD, is quite different from the way that it has been previously proposed (Herman & Van der Kolk, 1987; Luxenberg et al., 2001) and from the way in which I am conceptualizing chronic relational trauma disorder. The fact that this new research basically redefines complex PTSD in a different way from earlier descriptions (DESNOS) may be confusing to some. One advantage of the term chronic relational trauma disorder (CRTD) is that it is clearly differentiated from PTSD in a way that is easily understandable theoretically; as Howell and Blizard (2009) have conceptualized it, CRTD's origins in relational trauma is what distinguishes it from PTSD. One outcome of relational trauma may be the development of alternating, dissociated self-states with contradictory, idealizing, and devaluing relational patterns, distinctive of BPD.

Like Herman (1992) and Cloitre et al. (2013), Howell (2002) and Howell and Blizard (2009) have objected to the pejorative implications that BPD as a diagnosis has attracted, and propose as a replacement, CRTD, emphasizing aetiology. As DID is also understood as an outcome of relational trauma, this implies a close relationship between BPD and DID. Indeed, Putnam's (1997) review of studies showed that 30–70% of those diagnosed with DID also met criteria for BPD, and Şar et al. (2003) found that 64% of subjects with BPD had a dissociative disorder.

I have previously suggested that trauma might be best defined as 'the event(s) that cause dissociation', arguing that to think of trauma in this way 'puts the focus on splits and fissures in the psyche rather than solely on the external event' (Howell, 2005, p. ix). If an event cannot be assimilated, it cannot be linked with other experience, resulting in fissures in memory and experience. If a trauma has done that, it has caused dissociation. This conceptualization has the advantage of bypassing debates about the meaning of objectively defined trauma (which does not result in post-traumatic stress to all of those exposed to it) and subjective trauma (which can run the risk of categorizing anything that is distressing as traumatic), as well as the meaning of 'overwhelms' (which for some simply means 'upsetting').

Splitting and Disorganized Attachment

Relational trauma also affects attachment style. Akin to the identification with the aggressor model of relational trauma, disorganized attachment (D-attachment) proceeds from traumatizing and contradictory behaviours of the caregiver, and predisposes to BPD and splitting (Blizard, 2003; Fonagy, Gergely, Juist, & Target, 2002; Liotti, 1992; Lyons-Ruth, 2001). While overt familial maltreatment is not always evident in the families of disorganized children (Lyons-Ruth, 2001), parental behaviour that would not be traumatizing to an older child or adult might well be traumatizing to an infant or very young child. Note, for example, the behaviour of some of the mothers of disorganized infants described by Hesse and Main (1999): without signalling playfulness, they would enter into predatory-like behaviours with their infants, hissing, growling, stalking the

baby on all fours, and with fingers extended like claws. Such an experience might cause intense and traumatizing annihilation anxiety in a very young child, whereas an older child would be more likely to understand that mother is not really a predatory animal but is only pretending to be one. In contrast to the other identified attachment patterns (i.e. secure, ambivalent, avoidant), D-attachment is not coherently organized and is characterized by contradictory and segregated internal working models of the relationship with the attachment figure (see Chapter 7 of this book). The typical situation is a caregiver who is a source of danger and from whom protection is needed, generating contradictory internal working models (Blizard, 2003; Liotti, 1992; Lyons-Ruth, 2001). This is, of course, also a double bind (Blizard, 2003), first argued to be relevant for the development of both schizophrenia (Bateson, Jackson, Haley, & Weakland, 1956; see Chapter 8 of this book) and later for DID (Spiegel, 1986).

The contradictory 'Internal Working Models' described by attachment theorists such as Main and Hesse involve alternating behaviours of approach and flight (sometimes simultaneously exhibited). Giovanni Liotti (2011) describes how D-attachment arises from a conflict between the attachment system and the fight/flight (i.e. defence) system, both innate but different motivational systems. Thus, in D-attachment, the attachment system is activated, but the fight/flight system is also activated, similar to a repetitive approach–avoidance conflict. Although these systems normally operate in harmony, in situations in which the attachment figure *is* the abuser, they cannot. With repeated trauma, and without repair of the ensuing dissociative patterns, segregated, attached, and fearful self-states may develop, as Liotti (1992) has suggested.

Theoretical Analysis

Splitting: 'Good/Bad' Bipolarity or Identification with the Aggressor?

From the perspective of attachment theory, how should we consider abusive situations in which the child *knows* that it is not possible to flee? I suggest that this is conducive to a process of splitting proceeding from identification with the aggressor, as described by Ferenczi (1949). What may develop is a pattern of primarily two complex, interacting, and oscillating self-states that characterize the diagnostic group that has been called BPD.

Following from Ferenczi, I have proposed (Howell, 2002, 2014) that, as a dissociative defence, identification with the aggressor has two partially dissociated but enacted relational parts, the part of the victim and the part of the aggressor. As I see it, the switching of these self-states is central to the structure of BPD. Perhaps the splitting so often considered central to BPD can be understood as a particular type of switch. While Freud and Bleuler used the terms splitting and dissociation synonymously, object relations theorists such as Fairbairn, Klein, and Kernberg have not. One important difference is the assumption of bipolarity, of good and bad in alternating views of self and other, on which psychoanalysts have focused.

Perhaps the assumption of 'good/bad' bipolarity needs to be re-examined. It has been argued that 'borderline' splitting is quite similar to state switches in DID (Howell, 1999, 2002). Splitting, in the sense of good/bad bipolarity and opposites, generally involves a dramatic switch or shift in affect state, including experiences of the self and expectations

of the other. One difference in BPD is that the person retains a continuity of memory and will likely acknowledge a dramatic shift in behaviour and affect. However, to manage the experience, its meaning is disavowed. Since there is no amnesia for the switch in BPD, it is a partial, not a full, dissociation. Another difference is that personification of parts does not characterize BPD. And, finally, in BPD there is the characteristic alternation between primarily two self-states (splitting).

With respect to the assumption of good/bad bipolarity, might it not be more accurate to consider the alternating views of the other and the self, not in terms of libidinal (good) and aggressive (bad) objects, but as victim and aggressor identifications? Splitting in this sense seems to involve a particular organization of alternating dissociated submissive/victim and rageful/aggressor self-states that reflects the impact of relational trauma on defence, attachment style, and biological and neurological processes (Nijenhuis, 1999; Perry, 1999; Schore, 2003) that re-enact and embody the relational positions of the victim and aggressor (Howell, 1999, 2002, 2014).

In a way that is very similar to the process of 'identification with the aggressor' introduced by Ferenczi in 1932 in his address to the 12th International Psychoanalytic Association Congress (Ferenczi, 1949), these self-states become partially or entirely dissociated. In the victim-identified position, the child may be passive, submissive, numbed-out, helpless, robotic, and experience herself as attached to and dependent on the aggressor/caregiver. Having split off awareness of the dangerous aspects of the abuser and her underlying rage, she may orient herself around and idealize the aggressor for psychological survival. Furthermore, since the danger of abuse activates the attachment system, and since the attachment system induces proximity to the caretaker (Bowlby, 1969/1982, 1984) and also reduces fear (Lyons-Ruth, 2001), abuse at the hands of a needed attachment figure increases the child's attachment to the abusive caretaker, and paradoxically makes the child less fearful of the dangerous abuser. How does this happen? Ferenczi wrote that

> (T)he aggressor disappears as part of external reality and becomes intra- as opposed to extra-psychic; the intra-psychic is then subjected, in a dream-like state as is the traumatic trance, to the primary process … the attack as a rigid external reality ceases to exist and in the traumatic trance the child succeeds in maintaining the previous situation of tenderness (Ferenczi, 1949, p. 162).

Thus, a positive attachment relationship with the abuser, 'a situation of tenderness', is preserved in consciousness, while in dissociatively sequestered parts of the mind vestiges of the abusive situation live on. This identification with the aggressor is dissociogenic rather than an integrative, agentic process that expands the child's developing sense of identity.

Janet (1907) described how in the traumatic situation consciousness is constricted in an auto-hypnotic way. In the traumatic moment of being terrified and abused, the child cannot assimilate the events into narrative memory. Like many who are overwhelmed by danger, the child goes into a trance-like state in which the source of the danger, in this case the abuser, is held intensely in focus, but in a depersonalized and derealized way. Ferenczi noted that the abuser's behaviour is automatically mimicked, along with a focus on the abuser's wishes.

What contributes to the mimicry in the process of identification with the aggressor? In current day thinking, Lyons-Ruth (1999, 2003) describes unconscious 'procedural

ways of being with another' that reflect early interpersonal interactions and are implicit models of relationships. In addition, Gallese (2009) describes mirror neurons as essential to 'embodied simulation'; 'Watching someone grasping a cup of coffee, biting an apple, or kicking a football activates the same neurons of our brain that would fire if we were doing the same [things]' (p. 522).

Trauma disrupts a person's sense of continuity, not only by breaking apart the prior organization of experience but also by impeding the linking of states of mind in the course of development. This newly-divided self seriously impairs the child's ability to regulate affect and process information. While the affects and thoughts are the child's own, the abuse has impaired the child's ability to synthesize different states of mind because the tendency to alternate between victim and aggressor relational positions has become automatic. The victimized child has learned both roles – victim and abuser. She knows the abuser role quite intimately, as a result of having focused so intensely on the abuser's postures, motions, facial expressions, and so on.

This may help to explain the isolated rage, contempt, and omnipotence often termed 'identification with the aggressor'. Interestingly, some of the 'borderline' defences that Kernberg relates to splitting can be understood specifically in terms of dissociated victim and aggressor identity states. For instance, primitive idealization is felt from, and only from, the victim state. In contrast, omnipotence and devaluation is only evident in the aggressor state, as it relates to the abuser's experience in relation to, and treatment of, the victim.

This division into autonomous self-states begins to take on a life of its own. As long as the person oscillates between a hyper-attached self-state and an aggressive self-state in which attachment has been deactivated, terror is kept out of consciousness. Thus, splitting, in the sense of alternating victim and aggressive self-states, avoids the traumatic memories and impedes their assimilation, and is thereby self-reinforcing and self-perpetuating. While both of these states of mind avoid the terror-filled traumatic memories, the oscillation in tandem is even more rigidly avoidant, producing the 'stable instability' of BPD.

Ryle (1997) argues that splitting in BPD is the manifestation of internalized reciprocal role relationships, such as victim/bully, needy child/nurturing caregiver. In a pilot study by Ryle and colleagues (Bennet, Pollack, & Ryle, 2005), all 12 BPD participants identified with both the victim and bully states. Both Ryle and I distinguish between oscillating reciprocal relational positions and good/bad polarizations. These oscillating reciprocal relational positions can look like, and even be experienced as, good or bad, but these identifications are not really opposites, though they may appear to be so.

This oscillation occurs because the rageful self-state can only be maintained briefly before fear of abandonment or annihilation triggers the idealizing self-state which, in turn, can only be maintained for a short while before fear of vulnerability triggers the rageful self-state (Howell, 1999). Could it be that the ability to switch to an alternating self-state, the splitting (from victim to bully and back again), allows enough stability and organization to avoid a full-blown psychosis?

Of course, the development of the victim and aggressor positions as described here is heuristic and somewhat simplified. In my clinical experience, one often sees multiple victim and aggressor self-states interacting in multiple ways, even in those diagnosed with BPD. In DID, traumatized states and emotional parts of the personality are more fully encapsulated. This allows, in DID, for more of what Fairbairn called central ego

and the ability to consistently think reflectively. However, because of the tendency of borderline persons to quickly switch from victim to bully and back again, this alternating sense of endangerment and dominance profoundly impacts their sense of purpose and identity.

This approach based on Ferenczi's concept of identification with the aggressor dovetails with the attachment theory approach described earlier. The result in both is highly similar, even though the perspectives on genesis come from different theoretical viewpoints. What we call 'splitting' in the good/bad sense may well involve alternating attached and un-attached (that is, arising from the flight/flight system, rather than the attachment system) aspects of self as in disorganized attachment. Although similar to libidinal and aggressive, I believe that this is built upon a re-enactment of post-traumatic dominant–submissive relational patterns involving a particular organization of alternating dissociated helpless/victim and abusive/unattached self-states.

The abusive environment also leads to deficits in reflective thinking. Fonagy et al. (2002) hypothesize that maltreated children avoid thinking about the hateful intentions of abusive caregivers toward them because understanding the implications of their maltreatment would make them more aware of the caregiver's malevolent views of them and make them feel worthless. In effect, as is also proposed in the identification with the aggressor model, they must dissociate knowledge of the parent's malevolence. This severely limits the development of reflective functioning (RF), the capacity to think about mental states, processes, feelings, beliefs, and intentions of self and others. Poor RF, along with massive failures in attunement, inhibits the child's, and later the borderline person's, capacity to integrate, label, and regulate affect. This, in turn predisposes to dissociation and splitting.

The splitting in BPD can almost reach the level of delusions. When some 'borderline' persons alternate between seeing the therapist as a saving angel or the devil incarnate, both of these convictions are clearly out of touch with reality. These temporary 'delusions' may partially account for the perceptions of those on the receiving end that the borderline person is being 'manipulative', on account of her proneness and capacity to 'split' treatment teams. However, the borderline person believes these intense and alternating views of the other and the self. Perhaps it is the power of these delusional beliefs, derived from intrapsychic 'splitting', in a person who does not present, or perceive himself, as delusional, that triggers role-relationship patterns in others (Ryle, 1997) that produce the interpersonal and social splitting.

Summary

Over the past century and a quarter, the symptoms of borderline personality disorder have been linked with hysteria, schizophrenia, schizoid disorders, trauma disorders, and dissociative disorders. Trauma and dissociation appear to be the common aetiological threads. In particular, splitting, which is assumed to be characteristic of BPD, is a type of dissociation with a particular alternating pattern of self-states. The considerable overlap that has recently been noted among the diagnostic constructs of complex PTSD, dissociative disorders, BPD, and schizophrenia heralds a rapprochement with concepts of affect dysregulation, disorganized attachment, and the schizophrenia spectrum. But it is a rapprochement with a new twist; the trauma/dissociation model places all of

these in the context of the relational, shared human condition. As Harry Stack Sullivan, noted for his sensitive work with schizophrenic patients, said, 'We are all much more simply human than otherwise'.

In a plea for humanistic diagnosis and theoretical simplicity, I suggest that CRTD (Howell & Blizard, 2009) is an appropriate and descriptive diagnosis for persons previously diagnosed with BPD. It has the advantage of being simple, descriptive, non-pejorative, and free from historical diagnostic entanglements.

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7

An Attachment Perspective on Schizophrenia

The Role of Disorganized Attachment, Dissociation, and Mentalization

Andrew Gumley and Giovanni Liotti

In the second volume of his trilogy on attachment theory, John Bowlby (1973) wrote:

> when the actual experiences they have had during childhood are known and can be taken into account, the pathological fears of adult patients can often be seen in a radically new light. Paranoid symptoms that had been regarded as autogenous and imaginary are seen to be intelligible, albeit distorted, responses to historical events (p. 210).

Over 45 years later, the relationships between attachment, psychotic experiences, and their sequelae are only just beginning to be understood. A recent systematic review of attachment patterns in psychosis (Gumley, Taylor, Schwannauer, & Macbeth, 2014) found greater insecurity of attachment to be associated with more interpersonal problems, poorer engagement with services, more frequent and longer psychiatric hospitalizations, greater trauma, and lower levels of parental bonding. Thus, while attachment security is clearly compromised in individuals diagnosed with schizophrenia (Dozier, 1990; Dozier & Lee, 1995; Dozier & Lomax, 1994; Dozier, Lomax, Lee, & Spring, 2001; Gumley, Taylor, et al., 2014; Mickelson, Kessler, & Shaver, 1997; Tyrrell, Dozier, Teague, & Fallot, 1999), it is not yet clear how the developmental pathways from insecure early attachment leading to schizophrenia differ from those leading to other psychiatric disorders. Likewise, no unique developmental pathway has been found to lead from low levels of parental care and high levels of parental overprotection (Onstad, Skre, Torgersen, & Kringlen, 1994; Parker, Fairley, Greenwood, et al., 1982; Willinger, Heiden, Meszaros, et al., 2002; Winther Helgeland & Torgersen, 1997) and low security in close relationships (Ponizovsky, Nechamkin, & Rosca, 2007; Tait, Birchwood, & Trower, 2004) to schizophrenia, as such experiences, common in schizophrenia, are reported by persons with other diagnoses as well. While these data have been helpful in developing an attachment-based understanding of the correlates of treatment use, service engagement, and help-seeking (Berry, Barrowclough, & Wearden, 2007; Dozier, 1990; Dozier & Lomax, 1994; Tait et al., 2004), there has been little in the way of the development of an attachment-based theory of schizophrenia or psychosis.

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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In this chapter, we explore the possibility that developmental pathways from early interpersonal experiences, including those associated with attachment disorganization and childhood trauma, are instrumental in explaining the lifespan trajectories that lead to schizophrenia, potentially mediated by later avoidant attachment, dissociation, and mentalization deficits.

Caregiver Disorganization, Attachment Disorganization, and Dissociation

Bowlby (1969) proposed that two motivational systems interact in the relationship between parents and children:

- the infant's attachment system, designed to promote the survival of the infant by regulating proximity to the caregiver, and
- the parent's caregiving system, designed to guide protective behaviours by enhancing sensitivity to threat and danger and increasing attunement to the infant's signals.

Activation of the infant's attachment system results in behaviour that motivates proximity to the caregiver. Activation of the caregiving system in the adult results in behaviour designed to protect the infant and elicit behaviour that results in soothing distress, reduction in threat and fear, and restoring explorative behaviour. Synchronous and smooth reciprocal interactions between the attachment system and the caregiving system provide the basis for the development of the infant's, and later the child's, competences to regulate affect and reciprocally engage in interpersonal interactions with others. These experiences then provide the basis for further processes of development and adaptation through the lifespan.

Bowlby (1973) proposed that infants' experiences of interactions with attachment figures become internalized and carried forward into childhood and adulthood as implicit core relational schemata, also known as *internal working models* (IWM; Bretherton & Munholland, 1999). These produce procedurally based expectations about the self and others, and regulate cognitive, behavioural, and affective responses in interpersonal interactions. Early attachment relationships thus come to form, together with the intersubjective experiences of play and companionship with the caregivers (Trevarthen, 2005), the prototype for interpersonal relationships and self-regulation throughout life. Most interpersonal schemata that regulate relationships throughout childhood, adolescence, and adulthood are influenced by the IWM of self and others developed in the interaction with the primary caregivers and later elaborated through interactions with peers. Infant attachment research has shown that, by 12 months, infants develop different organized patterns of attachment behaviour toward their caregivers, according to the responses they receive to their requests for comfort, soothing, and protective closeness (Ainsworth, Blehar, Waters, & Wall, 1978). A specific IWM corresponds to each of these patterns. Three main patterns of early *organized* attachment have been identified: secure, avoidant, and resistant (ambivalent). In addition, a substantial minority of infants (around 15%; Van IJzendoorn, Schuengel, & Bakermans-Kranenburg, 1999) fail to develop any organized or coherent attachment pattern; their attachments are said to be *disorganized* (Main, 1991).

Attachment theory explains the origins of disorganized attachment behaviour in terms of conflict between two different inborn systems, the attachment system and the fight/flight (defence) system. The attachment and defence systems normally operate in harmony (i.e. flight from the source of fear to find refuge near the attachment figure). They, however, clash in infant–caregiver interactions where the caregiver is at the same time the *source of* and the *solution for* the infant's fear (Liotti, 2004). When exposed to frequent interactions with a helplessly *frightened*, *hostile* and *frightening*, or *confused* caregiver, infants are caught in a relational trap; their defence system motivates them to flee from the frightened and/or frightening caregiver, while at the same time their attachment system motivates them, under the influence of separation fear, to approach them. Thus, the disorganized infant is bound to the experience of '*fright without solution*' (Cassidy & Mohr, 2001; Madigan, Hawkins, Goldberg, & Benoit, 2006; Main & Hesse, 1990). This experience may also be understood as a type of early relational trauma, which exerts an adverse influence on the development of the stress-coping system in the infant's brain (Schore, 2003).

Assessing attachment patterns in adults differs from assessing attachment patterns in infants. The most influential approach for assessing adult attachment patterns is that provided by the Adult Attachment Interview (AAI: developed by Mary Main and collaborators – for an overview, see Hesse, 2008). The AAI helps to generate categories for adult attachment-based states of mind analogous to those used to classify infant attachment behaviour (Main, 1995). Secure attachment in the infant is predicted by states of mind in the caregiver that are called 'free' (i.e. free from the defensive exclusion of painful memories) or 'autonomous'. Ambivalent (or resistant) infant attachment is associated with a caregiver's preoccupied/enmeshed state of mind, and avoidant infant attachment is associated with an adult stance that is avoidant/dismissing of attachment.

Disorganization of infant attachment behaviour has been reliably linked to unresolved traumas or losses in caregivers' AAI transcripts (Main & Hesse, 1990; Van IJzendoorn et al., 1999) or to a caregiver's state of mind characterized by non-integrated hostile and helpless representations of self and attachment figures (Lyons-Ruth, Yellin, Melnick, & Atwood, 2003, 2005). The caregiver's attitudes that mediate between their unresolved/disaggregated states of mind and disorganization of infant attachment behaviour have been hypothesized to be frightening to the infant, either because they involve hostility and abrupt emotional and physical aggression, or because they express fear, helplessness, and dissociative absorption in painful memories (Main & Hesse, 1990). Further evidence of disrupted caregiver–infant communication also includes expressions of passivity, withdrawal, and the presence of contradictory cues (e.g. cues inviting play co-occurring with withdrawal; Lyons-Ruth & Bronfman, 1999). These caregiving behaviours have significance in terms of their impact on the development of reciprocity and mutuality of interactions. Contradictory caregiving behaviours differentiate disorganized from organized avoidant or organized ambivalent infants (Out, Bakermans-Krannenberg, & Van IJzendoorn, 2009).

George and Solomon (George & Solomon, 2008; Solomon & George, 1996) proposed that caregiver attachment and later infant attachment security is mediated by the caregiver's symbolic representation of the relationship with the child, i.e. the caregiving representation. There is a strong correspondence between maternal caregiving representation, maternal adult attachment classification, and the infant's attachment classification (Benoit, Parker, & Zeanah, 1997; George & Solomon, 1989; Zeanah, Benoit,

Hirschberg, & Barton, 1994). During the first 12 months of the child's life, maternal caregiving representations are consolidated via maternal caregiving behaviours, in parallel with the development of the infant's attachment behaviour. During this period, the caregiver constructs a fundamental internal shift in sense of self toward becoming an attachment figure and protector, facilitating coherent, appropriate organization of caregiving to the child.

Caregiving is a complex balancing act. The parent must be vigilant in detecting real and complex sources of danger and threat so as to respond to the child's needs and situational demands. This must be balanced against competing demands of other adult motivational systems, including peer relationships and friendships (affiliative system), sexual relationships (sexual system), work (exploratory system), and importantly, the parent's own needs for comfort and care (attachment system; George & Solomon, 2011). In this way, caregivers construct a *safe haven* (for resolving distress and protecting the infant) and a *secure base* (for facilitating the infant's needs to explore and develop greater autonomy over time). The caregiving representation is shaped by the caregiver's own attachment experiences, current life situation, level of social support, and the characteristics of the relationship experience with the infant. In this way, infant attachment security is not predetermined by the caregiver's attachment security but is shaped by the current context and the level of flexible attunement, balancing safe haven and secure base behaviours. The defensive exclusion and segregation of attachment experiences and affects apparent in deactivated (avoidant), disconnected (preoccupied), and disorganized (contradictory) caregiving representations are linked to loss of caregiver attunement and sensitivity to infant signals. Specifically, caregiving *helplessness representations* are assigned to mothers who experience themselves as struggling but failing to manage or control both the child and their own negative emotions, and is associated with infant disorganized attachment (Solomon & George, 2011). Furthermore, in that study, caregiver helplessness representations closely corresponded to experiences of complicated loss and rage (originating from the caregiver's family experiences).

Therefore, attachment disorganization can be regarded as the outcome of intersubjective experiences arising from disrupted affect regulation within the infant–parent dyad. These experiences may involve overt abuse, but can also be characterized by emotional *misattunement* and contradictory caregiving behaviours unaccompanied by maltreatment (De Oliveira, Neufeld-Bailey, Moran, & Pederson, 2004; Hesse, Main, Abrams, & Rifkin, 2003; Lyons-Ruth, 2003). There is evidence that not only aggression, but also frightened and dissociative behaviour on the part of the caregiver can cause disorganization in the infant's attachment behaviour (Schuengel, Bakermans-Kranenburg, Van IJzendoorn, & Blom, 1999). Attachment disorganization, regardless of its source, yields proneness to react to later traumas with dissociation and fragmentation of self-experience (Carlson, 1998; Dutra, Bureau, Holmes, Lyubchik, & Lyons-Ruth, 2009; Hesse et al., 2003; Liotti, 1992, 1999, 2004, 2006; Lyons-Ruth, 2003; Main & Hesse, 1990; Main & Morgan, 1996; Ogawa, Sroufe, Weinfield, et al., 1997).

Research with the AAI has found evidence for both the intergenerational transmission of attachment patterns and the stability of attachment representations throughout the lifespan. The child who has been securely attached is likely to become an adult with an autonomous state of mind, while children who have been ambivalent, avoidant, or disorganized in their early attachment are likely to develop, respectively, preoccupied, dismissing and unresolved or hostile/helpless states of mind (Benoit & Parker, 1994;

Lyons-Ruth et al., 2003; Waters, Merrick, Treboux, et al., 2000). In samples of adult psychiatric patients of various diagnoses, unresolved and non-integrated (hostile/helpless) states of mind are, by far, the most frequently found, suggesting that early attachment disorganization is a particularly frequent antecedent of adult psychopathology (Dozier, Stovall-McClough, & Albus, 2008; Levy, 2005).

Attachment disorganization is linked to IWM in childhood, and to states of mind concerning attachment in adult life, that are incoherent, non-integrated, and characterized by *three* reciprocally incompatible attitudes: hostility, helplessness, and grandiose expectations concerning the possibility of helping others (compulsive caregiving). The simultaneous occurrence of these three contradictory attitudes parallels the quick dramatic shifts, in response to stressful demands, between contradictory and unrealistic expectations about self and others that are so often witnessed by clinicians treating patients with fragmented experiences of the self (Liotti, 1999, 2004; Lyons-Ruth, 2003; Lyons-Ruth et al., 2003, 2005). These competing and conflicting attitudes or strategies, associated with attachment disorganization, could be seen as a dissociative style of attention and information processing. Indeed, many researchers and theoreticians regard the dissociative style of attention and experience as typical of attachment disorganization (Koos & Gergely, 2001; Liotti, 1992, 1999, 2006; Lyons-Ruth, 2003; Main & Morgan, 1996; Ogawa et al., 1997). Other research suggests that infant attachment disorganization often leads to proneness for dissociative experiences throughout development (Carlson, 1998; Dutra et al., 2009; Hesse & Van IJzendoorn, 1999; Ogawa et al., 1997). Other likely consequences of early attachment disorganization are deficits in affect regulation (Conklin, Bradley, & Westen, 2006; De Oliveira et al., 2004; Hesse et al., 2003), in stress-coping capacity (Schore, 2003; Spangler & Grossmann, 1999), in metacognitive or self-reflective abilities (mentalization: Bateman & Fonagy, 2004; Fonagy, Target, Gergely, et al., 2003), and in the control of aggressive impulses (Lyons-Ruth, 1996). All these findings on the sequelae of early disorganized attachment suggest that it is a risk factor in the development of a wide range of psychiatric disorders. This hypothesis is supported by an increasing number of clinical and empirical studies involving the AAI (for reviews, see Dozier et al., 2008; Levy, 2005). Although early attachment disorganization is linked to the development of a wide range of DSM psychiatric diagnoses, we would argue that it is essentially a dissociative process (Liotti, 2004; Main & Morgan, 1996). Therefore, we could expect that it is more strongly linked to disorders characterized by severe dissociation, splitting among ego states, and fragmentation of the self, than to other psychiatric disorders (Howell, 2005; Liotti, 1992, 1995, 1999, 2004; Lyons-Ruth, 2003; Lyons-Ruth, Melnick, Patrick, & Hobson, 2007).

Patterns of Early Interpersonal Interaction

Having one parent with a diagnosis of schizophrenia results in a 7% lifetime risk of schizophrenia (Gottesman, Laursen, Bertelsen, & Mortensen, 2010) and a 55% risk of developing any psychiatric condition (Rasic, Hajek, Alda, & Uher, 2014). While this is often interpreted as evidence of genetic transmission, other interpretations are possible. Davidsen, Harder, Macbeth, Lundy, and Gumley (2015) identified 27 studies from 10 separate cohorts investigating the characteristics of early caregiver–infant interaction in women with schizophrenia/psychosis compared to depression, bipolar,

and non-psychiatric controls. Compared to women from the other groups, those diagnosed with a psychotic disorder demonstrated caregiving behaviour in the first 12 months manifested by reduced interpersonal and physical contact, reduced spontaneity, less attunement and warmth, and greater tension. There was also evidence that levels of tension were linked to more insecure (avoidant) attachment at 12 months and reduced fear of strangers (Näslund, Persson-Blennow, Mcneil, Kaij, & Malmquist-Larsson, 1984; Persson-Blennow, Näslund, McNeil, & Kaij, 1986). Reduced fear of strangers in this context is consistent with insecure-avoidant and suggestive of insecure-disorganized attachment. Insecure attachment at 12 months was associated with less harmonious and reciprocal interactions at 3 weeks and 6 months (Persson-Blennow, Binett, & Mcneil, 1988). Less harmonious interaction during feeding at 6 months was also associated with reduced fear of strangers at 12 months (Persson-Blennow et al., 1988). These data signal important risk factors consistent with disturbances in caregiving behaviour, mutuality of interaction and infant development, and insecure attachment. Specifically, attachment insecurity was characterized by avoidant attachment. Alongside this, the presence of reduced fear of strangers is consistent with underdevelopment or inhibition of the attachment system in infants at elevated genetic risk.

Further indirect support for the possible role of attachment disorganization comes from other types of research studies. Being an unwanted child at birth confers an increased risk of psychosis (Myhrman, Rantakallio, Isohanni, & Jones, 1996), and an adult diagnosis of schizophreniform disorder has been linked to harsh mother–child interactions and a 'lack of assistance' at age three (Cannon, Van Erp, Rosso, et al., 2002). Similarly, the 1946 British Birth Cohort Survey found that those who experienced poor parenting at the age of four were significantly more likely to be diagnosed with schizophrenia in adulthood (Jones, Rodgers, Murray, & Marmot, 1994). Two studies of 'high risk' populations are also relevant. In an adoption study, children of biological parents with schizophrenia only developed *thought disorder* when placed with adopted families who demonstrated communication deviance (Wahlberg, Wynne, Oja, et al., 1997), and those who reported negative parental relationships were especially likely to go on to develop psychotic symptoms at follow-up (Schiffman et al., 2004). While these studies do not directly explore early attachment patterns, they do address factors known to be associated with attachment disorganization. De Sousa, Varese, Sellwood, and Bentall (2014)) explored parental '*communication deviance*' (CD) as a risk factor for developing psychosis. CD refers to a form of intrafamilial communication that is vague, fragmented, and contradictory and that compromises the development and sharing of meaning between parent and offspring, leading to a consequent breakdown in communication. Twenty studies comprising 1753 parent participants found a robust association between psychosis in offspring and parental CD. Prospective studies show that CD in the parent precedes the development of psychosis in the offspring (Goldstein, 1987) and that healthy communication in adopting couples has a protective effect in the case of high-risk adoptees (Wahlberg et al., 1997).

Taken together, these two groups of studies (high risk birth cohorts of caregiver–infant interaction and parental CD) point toward the potentially important role of disorganization of caregiver communication as a vehicle through which further vulnerability to the development of psychosis in later life is expressed.

Trauma and Loss in the Lives of Primary Caregivers of Psychiatric Patients

A further marker for risk of attachment and caregiver disorganization is the presence of trauma and loss in the lives of primary caregivers. Two studies (Liotti, Pasquini, and The Italian Group for the Study of Dissociation, 2000; Pasquini, Liotti, Mazzotti, Fassone, Picardi, and the Italian Group for the Study of Dissociation, 2002) have explored the relationship between borderline personality disorder (BPD), dissociative disorders, and severe traumas or losses suffered by the mothers of adult patients in the two years before or after the patients' birth (shown to increase the risk for infant attachment disorganization in other studies, Van IJzendoorn et al., 1999). In comparison to clinical (anxiety and affective disorder) controls, both the dissociative and borderline groups showed a significantly higher frequency of major losses and severe traumas in the lives of the patients' mothers in the years around the patients' birth. In light of the robust evidence linking unresolved traumas and losses *in the mother* to attachment disorganization *in the offspring* (Van IJzendoorn et al., 1999), it was hypothesized that the specific pathogenic effect of the mothers' traumas and losses which fostered fragmentation and splitting of the self in the patients was produced via early disorganized attachment.

These two studies (Liotti et al., 2000; Pasquini et al., 2002) also examined the connection between childhood traumatic experiences (assessed through a semi-structured trauma interview) and dissociation or splits in the sense of self in the patients (assessed through the Dissociative Experience Scale and the Structured Clinical Interview for DSM-IV Dissociative Disorders [SCID-D]). Childhood trauma in the patients and losses and/or traumas in the lives of the mothers were found to be independent risk factors for the development of both borderline and dissociative disorders. In other words, the risk of developing a dissociative disorder or borderline personality disorder, rather than another type of mental disorder less associated with fragmentation of self-experience, was increased by two (theoretically) independent past conditions: (i) the patient's mother was mourning over a loss (or dealing with a serious trauma) during the patient's infancy and (ii) the patient's childhood had been plagued by severe traumatic experiences (losses and/or sexual, emotional, and physical abuse). This combination of risk factors may also be relevant to understanding the developmental pathways of individuals diagnosed with schizophrenia, as a third study suggests.

Persons diagnosed with schizophrenia were not included in the control group in the two studies discussed above because it was felt that schizophrenia, unlike the anxiety and affective disorders included in the control group, might be affected by fragmentation of mental states similar to those seen in borderline and dissociative conditions. Instead, a third (inpatient) study was conducted (Miti & Chiaia, 2003) in which 41 patients with dissociative disorders or borderline personality disorder were compared to 62 patients, primarily diagnosed with schizophrenia. No differences were found between those diagnosed with dissociative disorders or borderline personality disorder and schizophrenia with regard to the amount of losses and traumas experienced by the mothers, which was high in all three groups. This finding is consistent with clinical observations reported by Walsh (1978) that parents of young patients diagnosed with schizophrenia reported losses suffered just before or after the patient's birth much more often than parents of young patients with different diagnoses. It is therefore not unreasonable to propose that disorganization of caregiving and attachment arising

from trauma and loss may play a role in the development of schizophrenia and other psychoses.

Early disorganized attachment – it has been argued – is a risk factor for psychopathology because it produces responses to later traumas and losses that are characterized by fragmentation of self-experience (Liotti, 1992, 2004, 2006; Ogawa et al., 1997). Traumas and losses suffered from childhood to adolescence increase the risk not only of developing dissociative and borderline conditions, but also of developing psychotic disorders (Morgan, Kirkbride, Leff, et al., 2007; Verese et al., 2012; for a review, see Chapter 9 of this book). In a meta-analysis of childhood adversity and risk of psychosis, Verese et al. (2012) found that childhood adversity increased risk of psychosis, and that this was significant for all types of adversity including sexual, physical, and emotional abuse, bullying, and neglect. Among 13–16 year olds, severity of trauma (bullying) was linked to psychosis in a 'dose–response' fashion, and cessation of trauma was linked to reduced risk (Verese et al., 2012). This indicates that the likely direction of effect is from trauma to psychosis (Kelleher et al., 2013). One could hypothesize, therefore, that the psychopathological pathway – leading from early attachment disorganization to dissociative states of mind via the impact of later traumas/losses – increases the risk for every type of disorder associated with a fragmented sense of self, including schizophrenia.

Disorganization, Dissociation, and Psychotic Experiences

One reason for the widespread influence of attachment disorganization in the genesis of psychiatric disorders could be that dissociative processes lie at the base not only of dissociative and borderline disorders but also of many other psychopathological developments. With regard to schizophrenia, Holowka, King, Saheb, et al. (2003) found significant correlations between dissociation and both emotional and physical abuse in a sample of adult psychotic individuals. Moskowitz and colleagues (Moskowitz, Barker-Collo, & Ellson, 2005; Moskowitz, Read, Farrelly, et al., 2009) have argued convincingly in favour of the thesis that most, if not all, positive symptoms of schizophrenia may be viewed as dissociative in nature (see also Chapters 4 and 13 of this book).

The dissociative style of information processing is not immediately apparent in children whose attachment behaviour has been disorganized during infancy, because they are able to organize their interpersonal behaviour with controlling strategies, or by inhibiting the attachment motivational system. The majority of preschool children who had been disorganized in their attachments during infancy develop controlling strategies toward their caregiver (Hesse et al., 2003; Lyons-Ruth & Jacobvitz, 2008). These controlling strategies help to organize parent–child intersubjective experience and behaviour, but at the cost of inverting the direction of protection and punitive control. Two main controlling strategies have been identified in children who have been disorganized in their infant attachments. Controlling children may display toward the parent either a punitive-dominant attitude (controlling-punitive strategy), or a tendency toward solicitous protection and care (controlling-caregiving strategy). Use of child controlling strategies are linked to caregiver disorganization (Solomon & George, 2011).

Another strategy to limit the activation of a disorganized IWM might simply be the inhibition of attachment needs. Such an inhibition is reflected in a style of interpersonal behaviour that is similar to avoidant attachment patterns and to states of mind that are

dismissing of attachment. Indeed, dismissing/avoidant strategies in adults are not always the outcome of avoidant patterns of early attachment. Longitudinal studies suggest that a high percentage of children who have been disorganized in their early attachments may resort to dismissing strategies as adults (Main, Hesse, & Kaplan, 2005). This is because, in order to protect themselves from the repetition of fear without solution, they attempt to deactivate their attachment needs. Such patterns may be related to the development of psychosis. Indeed, combination of early infant disorganization and later organized (avoidant/deactivating) affect regulatory strategies may represent a crucial and potentially enduring vulnerability factor for either 'chronic' persistent psychosis or a relapsing course.

A strong activation of the attachment system (e.g. because of real or imagined separations from caregivers, or because of traumatic events) can cause a *collapse* of controlling strategies and an unleashing of the formerly defensively inhibited attachment needs. The surfacing of dissociative experiences linked to the IWM of disorganized attachment is the consequence of such a collapse (Hesse et al., 2003; Liotti, 2004). Such an explanation holds for dissociative symptoms both in the dissociative and borderline disorders (Liotti, 2004), and may hold also for psychotic symptoms. For example, the association between childhood trauma, intensity of emotional distress and psychotic experiences is mediated by stress sensitivity (Lardinois, Lataster, Mengelers, Van Os, & Myin-Germeys, 2011). Stress sensitivity and affective disturbance are important markers for the activation of the attachment system. This is also consistent with the finding that childhood trauma is specifically related to paranoia and hallucinations (Sitko, Bentall, Shevlin, O'Sullivan, & Sellwood, 2014).

Therefore, we propose a pathway from early attachment disorganization and/or experiences of childhood adversity, including trauma, loss, and separations, that gives rise to a proneness to dysregulate in response to stress (stress sensitivity), leading to the occurrence of psychotic experiences. This pathway is likely to be shared with other materializations of psychopathology in adolescence and adulthood (including 'at risk mental states', borderline personality disorder, and dissociative disorders). A more specific pathway for schizophrenia or related expressions of psychopathology, related to negative symptoms, may be dismissing/avoidant or inhibited attachment.

Attachment and Affect Regulation in Psychosis

Consistent with this proposal is the finding that, in one of the first studies using the AAI with schizophrenia, a high proportion of all patients' interviews were coded 'U' (unresolved with respect to loss or trauma), suggesting disorganization of attachment (Dozier & Lee, 1995). In addition, participants manifesting dismissing/avoidant attachment had a tendency to under-report symptoms, were less likely to seek help, and made poor use of treatment. Dozier et al. (2001) found that those with avoidant attachment were also more rejecting of family members and felt more confused following interactions with their case managers. In a more recent study, Gumley, Schwannauer, et al. (2014) found that around 50% of individuals with a first episode psychosis were classified as avoidant of attachment and that 31% were unresolved (in relation to loss). Greater attachment insecurity (largely accounted for by avoidance) predicted the persistence of negative symptoms at 12 months, controlling for baseline negative symptoms, insight, and

duration of untreated psychosis. No such direct relationship was shown between attachment insecurity and positive symptoms. Rather, the relationship between attachment and positive symptoms was fully mediated by *insight*, where higher attachment insecurity was related to lower insight, which in turn was related to more severe psychosis. Attachment avoidance has been linked to the deactivation of positive and negative affect, interpersonal distancing, impaired mentalization, avoidance of affect-linked autobiographical memories, and a lack of trusting and confiding relationships (Fraley, 2002). Therefore, the association with negative symptoms is of interest as this would suggest that attachment processes may have a role in the unfolding of negative symptoms and that deactivation strategies or inhibition of attachment are linked to the deactivation of positive and negative affect. The findings in relation to positive symptom outcomes are consistent with this 'affect regulation' hypothesis. Attachment security exerted an influence on positive symptom recovery via a shorter DUP (duration of untreated psychosis) and greater insight (Gumley, Schwannauer, et al., 2014).

Metacognition, Mentalization, and Affect Regulation

Macbeth, Gumley, Schwannauer, and Fisher (2011) found that dismissing attachment was associated with low levels of *reflective functioning* – the individual's understanding of the thoughts, feelings, intentions, and goals of self and others, and the interaction of these phenomena in terms of making sense of their own and others' behaviour in the context of attachment relationships. Reflective functioning is a competency underpinning the interpersonal aspects of affect regulation, and is a construct closely related to metacognition, mentalization, and theory of mind. Metacognition (i.e. the ability to monitor and reflect on mental states and inner experiences) can be conceptualized as a multifaceted skill, composed of a number of independent abilities (Semerari, DiMaggio, Nicolò, Procacci, & Carcione, 2007). It could be considered a composite mental function, including an array of sub-functions needed to understand one's own behaviour and the behaviour of others through: (i) the attribution of mental states to others and to self (theory of mind, TOM), (ii) taking the perspectives of others, (iii) differentiating similar mental states (e.g. between fatigue and sadness), (iv) putting together integrated and coherent representations of self and others with corresponding narratives, and (v) differentiating from external reality those processes that are generated internally, such as thoughts (source memory).

Fonagy (Bateman & Fonagy, 2004; Fonagy et al., 2003) argue that different, though related, concepts such as 'metacognition' and 'TOM' may be ultimately reduced to the capacity to reflect on experience, and have called this overall capacity 'mentalization' or 'reflective functioning'. Mentalization refers to 'mind-mindedness', and reflective functioning describes the processes by which mind-mindedness is acquired. Mentalization may be defined as the process by which we come to understand that having a mind mediates our experience of the world via the representation of psychological states. It refers to an intentional stance characterized by the interpersonal awareness that experiences give rise to certain beliefs and emotions, and that particular beliefs, desires, and intentions tend to result in corresponding types of behaviour. This intentional stance is essential to the creation of a continuity of self-experience that is the underpinning of a coherent self-structure.

Since Frith (1992), the association between mentalization (which he called 'theory of mind') and the core symptoms of schizophrenia has been an important area of research. Robust evidence has now emerged to show that mentalization is impaired among persons with a diagnosis of schizophrenia compared to non-patient controls (Sprong, Schothorst, Vos, et al., 2007). Sprong and colleagues (2007) found that mentalization was impaired among patients in remission, which indicates that deficits in this overall capacity are not merely a consequence of acute symptoms and may reflect a more stable vulnerability factor for the development of schizophrenia. Sprong et al.'s (2007) meta-analysis found that individuals diagnosed with schizophrenia, whose states of mind were disorganized by acute psychotic experiences, performed more poorly in mentalization tasks than patients with more organized states of mind (paranoid patients and patients in remission). This finding is consistent with the proposal that acute and disorganizing psychotic experiences are linked to the collapse of self-reflective capacity, which in turn may be the consequence of the collapse in the controlling strategies (or of the disinhibition of attachment needs) that kept at bay the dissociating influence of a disorganized IWM of early attachment.

In the context of attachment-related discourse, impairments in metacognition are associated with higher negative symptoms, poorer early adolescent social adjustment, and reduced likelihood of seeking help in a crisis (Macbeth et al., 2014). Childhood sexual trauma is associated with poorer awareness of others' mental states but not impaired self-reflexivity, suggesting that traumatic experiences may shape how metacognition is deployed (Lysaker et al., 2011). McLeod, Gumley, Macbeth, Schwannauer, and Lysaker (2014) found that impairments in self reflexivity, understanding others' mental states, and mastery of interpersonal problems using mental state information, predicted lower rates of recovery of positive and negative symptoms at 6 months and 12 months. These findings remained significant when controlling for severity of respective positive and negative symptoms during the first episode of psychosis, duration of untreated psychosis, and also levels of premorbid social and academic functioning.

Deficits in the development of mentalization may be caused, or made worse, by attachment dynamics caused by the abusive behaviour of the primary caregivers. Interactions with an abusive caregiver during childhood and adolescence produce their pathogenetic effects in three ways: (i) they are a repetition of the condition causing attachment disorganization in infancy (the attachment figure is at the same time the source of care and the cause of fear), (ii) they cause peritraumatic and post-traumatic dissociative responses of their own, and (iii) they directly hinder the victims' capacity to reflect on their own mental state, and infer the mental state of their caregiver. Indeed, it is a difficult, if not impossible, task for a child to reflect on the intentions of a caregiver who seems to deliberately want to harm them (Fonagy et al., 2003).

A mentalization deficit hinders the capacity for affect regulation in both personal and interpersonal domains, as well as the capacity to reconsider unusual (dissociative) experiences in the light of common sense and other people's opinions. It could be argued, therefore, that a more severe mentalization deficit distinguishes schizophrenia from other problems, such as the dissociative and borderline disorders. While people with schizophrenia and dissociative/borderline personality disorders show impairments in metacognitive and reflective functioning to a similar degree (see, for example, Macbeth et al., 2011), the underpinning attachment-based affect regulation strategies are likely to be quite different. Dissociative/borderline personality disorders reveal a more unstable

and fragmented affect regulation system characterized by contradictory strategies and frequent traumatic intrusions leading to a mentalizing system vulnerable to collapse. In contrast, Gumley, Schwannauer, et al. (2014) found low rates of contradictory strategies in their first episode sample and a predominance of avoidant attachment in those who have a poor recovery (and trajectory into a schizophrenia diagnosis). This is consistent with the propositions made earlier that in schizophrenia the trajectory from disorganization to psychosis in adulthood may be shaped by the resolution of disorganization through avoidance of attachment or inhibition of the attachment system. While this organization creates greater stability in the short term, the developmental cost of this is: (i) impairments in the awareness of self and others' mental states and (ii) under-developed affect regulation systems leading to (iii) greater sensitivity to stress and negative affect producing the context for internal experiences (e.g. thoughts, feelings, images) being experienced as fragmented, compartmentalized, segregated, and external to the self (e.g. auditory hallucinations). In support of this, deficits in source memory have been linked to voices and other hallucinations (Brebion, Gorman, Malaspina, & Amador, 2004; Johns, Gregg, Allen, & McGuire, 2006). Problems in source memory have been found in schizophrenia (Vinogradov, Willis-Shore, Poole, et al., 1997), but have also been seen in pathological responses to traumas (McNally, Clancy, Barrett, & Parker, 2005) and in borderline personality disorder where, interestingly, it correlates strongly with hostility and paranoid ideation (Minzenberg, Fisher-Irving, Poole, & Vinogradov, 2006).

Summary and Theoretical Integration

The manifold research studies reviewed here allow for a theoretical integration proposing possible developmental pathways into psychosis. In this integrated model, caregiver disorganization and infant attachment disorganization are early risk factors for the development of shattered and fragmented states of mind. The relationship between attachment disorganization and later severe disorders, including schizophrenia, is likely to be mediated by dissociative responses to traumas, yielding multiple, dramatic, fragmented, and alienated self and other representations. In this model, the experience and the interpersonal effects of the dissociative responses are complicated by a fragile and limited self-reflective (mentalizing) capacity, which is vulnerable to the destabilizing impact of negative affect and stress sensitivity. In such a context of dissociative mental operations and mentalization deficits, the pre-existing, underlying negative interpersonal schemata of early attachment disorganization break loose in the person's consciousness, creating the base for positive symptoms.

This model proposes different pathways to positive and negative symptoms. We argue that the positive symptoms of schizophrenia arise from dissociative, *disorganized* affect regulatory strategies and overwhelming affects linked to attachment dynamics (fright without solution). In contrast, the negative symptoms (alogia, avolition, and affective flattening) may be the product of *organized* affect regulatory mechanisms aimed at coping with the fragmentation of self-experience brought on by attachment disorganization. The use of deactivating affect regulation strategies characteristic of an avoidant/dismissing insecure attachment organization is typical of the AAI narratives of adults with a diagnosis of schizophrenia (Dozier et al., 2008; Gumley, Taylor, et al., 2014; Macbeth et al., 2011). Longitudinal studies show that avoidant/dismissing states of mind in adults

may be the outcome of either avoidant *or* disorganized attachments in infancy (Main et al., 2005; Waters et al., 2000). Negative symptoms, associated with severe disturbances in interpersonal functioning and mentalization, may then be viewed as the outcome of attempts at deactivating or inhibiting the attachment motivational system in order to cope with disorganization and fear without solution in attachment interactions. Evidence for the use of deactivating affect regulation strategies has been suggested by studies of recovery style in schizophrenia. For example, Tait et al. (2004) found that, during the process of recovery following acute psychosis, participants tended to make greater use of a 'sealing over' (as opposed to an 'integrated') style of recovery. *Sealing over*, trying not to think about or even denying the psychotic episode, is clearly an avoidant recovery strategy, and is associated with less felt security in peer relationships, greater sensitivity to rejection, and more negative and rejecting experiences of parenting (Tait et al., 2004). Sealing over may be interpreted as an attempt at inhibiting attachment needs, presumably as a way of limiting the dissociative experiences linked to an IWM of disorganized attachment. Schwannauer, Gumley, Fisher, Clark, and Macbeth (In preparation) found that lower levels of service engagement were associated with lower rates of remission and increased rates of coercion into hospital. These findings emphasize the continuing importance of professional caregivers' representations influencing the course and recovery following psychosis. In this way, individuals' history and patterns of interpersonal relationships, alongside affect regulation and mentalization, provide the context through which psychopathology expresses itself over the lifespan.

Concluding Remarks

The validity of schizophrenia has been challenged by a number of authors (Bentall, 1993; Boyle, 1990; Morrison, Frame, & Larkin, 2003; Moskowitz et al., 2009; Read, 2004). The hypotheses, supported by gradually emerging empirical evidence, that we have discussed in this chapter are in agreement with these positions, and particularly with the criticism of the neurocognitive accounts of schizophrenia. Neurocognitive models of schizophrenia have evolved in isolation from developmental theories of interpersonal functioning and affect regulation and have therefore ignored fundamental emotional–interpersonal pathways that may lead to the disorder. Many authors object to this approach. Bentall, Fernyhough, and Morrison (2007) have criticized neurocognitive models for lacking variables that are clearly linked to a diagnosis of schizophrenia. Gumley, Taylor, et al. (2014) have argued for the centrality of emotion regulation in understanding the development and course of psychosis. And Birchwood (2003) has argued that emotion dysfunction is intrinsic to schizophrenia and can best be understood within the context of social developmental pathways.

Our approach agrees with these criticisms insofar as it supports the central importance of attachment disorganization, trauma, and dissociation in understanding the roots of cognitive and metacognitive (mentalizing) dysfunctions in schizophrenia. Attachment disorganization is responsible for hindrances to affect regulation, both directly (Schore, 2003) and through facilitation of dissociative responses to traumas (Liotti, 2004) and mentalization deficits (Bateman & Fonagy, 2004). One consequence of the perspective of attachment disorganization on the genesis of schizophrenia is that, in a dimensional approach to psychopathology, schizophrenia may share common developmental

pathways with at least two disorders primarily characterized by affect dysregulation and fragmented states of mind: BPD and dissociative disorders. But further research will be required to elucidate the specific developmental pathways and mechanisms that could aid our understanding and differentiation of these devastating conditions.

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8

Childhood Experiences and Delusions

Trauma, Memory, and the Double Bind

Andrew Moskowitz and Rosario Montirosso

For most of human history, the experience of delusions has been synonymous with madness – the expression of ideas that make little sense to others. This is still largely the case, as delusions are a core symptom of schizophrenia, the paradigmatic form of madness, and are central to most definitions of psychosis (DSM-IV, APA, 1994) or 'psychotic features' (DSM-5, 2013).

Over the past century, beginning with Karl Jaspers, delusions have been regarded as not being capable of being understood, or of being 'psychologically irreducible' (Jaspers, 1913/1963). These 'genuine' or 'primary' delusions, according to Jaspers, are characteristic of schizophrenia, in contrast to 'secondary' delusions or 'delusion-like' ideas, which he considered to be *understandable explanations* for psychological experiences (hallucinations, for example, or intense emotions). These distinctions have implicitly continued to this day, as psychotic symptoms apparently connected to life experiences (such as traumatizing events) are often referred to not as *psychotic* but as 'psychotic-*like*' (or *quasi*-delusions or *pseudo*-hallucinations). Indeed, in its everyday use, *psychosis* is often linked with the term *incomprehensible* (see Chapter 1 of this book).

Nonetheless, we will contend in this chapter that the incomprehensibility of most delusions, including those Jaspers referred to as *primary*, is only apparent, and stems from the observer/clinician (and often the deluded person him- or herself) being unaware of the life context from which the delusion stems. This may occur if there is amnesia for the event, if the emotion or significance of the event or events is stripped from the autobiographical narrative, or if the experiences occur so early in life that there is no possibility for verbally-based recall.

In this chapter, we will consider research and theory from a variety of domains to grapple with the nature of delusions. These will involve theory and research on delusions, including a discussion of Jaspers' *Wahnstimmung* ('delusional mood' – an intense emotional state preceding the development of *primary* delusions), multiple memory systems (emphasizing the differential impact of trauma), and early childhood experiences, particularly those associated with disorganized attachment. We will also utilize clinical material to illustrate these points, including the famous nineteenth century

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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Judge Daniel Schreber case, and reconsider the double-bind theory of schizophrenia in connection with the research domains considered above.

While we will not (and cannot) insist that *all* delusions must have their genesis in childhood experiences, we will contend that many, if not most, delusions are explanations for powerful emotional experiences, which may be memory-based. Delusions developing in this way could serve multiple purposes, including containing overwhelming affect, providing for the symbolic expression of real-life events, ensuring that traumatic memories do not reach consciousness, providing a specific focus for anxiety and action, and allowing for the enactment of behaviours considered unacceptable during non-psychotic states.

Delusions

Definitions

Delusions have long been considered to be 'false beliefs' held with 'conviction', which are unaffected by 'opposing evidence'. Common delusions include paranoia, grandiosity, delusions of reference (where 'neutral' objects or events, such as newspaper headlines, are interpreted as having unique, personal meaning), and – particularly for schizophrenia – 'bizarre' delusions (involving phenomena that are regarded as 'physically impossible' in a person's culture; APA, 2013, p. 819). The DSM-5 (APA, 2013) considers delusions to be 'fixed beliefs that are not amenable to change in light of conflicting evidence' (p. 87). The definition in the DSM-5 glossary is somewhat broader; delusions are considered to be 'false beliefs' based on 'incorrect inference' about 'external reality', not consistent with the typical beliefs of one's culture or subculture, that are 'firmly held' despite 'incontrovertible and obvious proof or evidence to the contrary' (p. 819). This is almost identical to the definition used in the previous version, the DSM-IV (APA, 1994), and in earlier versions.[1]

The contemporary concept of 'delusions' derives from Karl Jaspers' influential 1913 book, *General Psychopathology* (Jaspers, 1913/1963). In that text, Jaspers argues that delusions are characterized by: (i) subjective certainty, (ii) imperviousness to counter-arguments, and (iii) implausibility of content (Mishara & Fusar-Poli, 2013). Jaspers (1913/1963) felt that the distinction between 'genuine' delusions (i.e. non-understandable) and 'delusion-like ideas' (understandable) could not be made based on the content of the delusions; only by considering the psychological experiences *preceding* the development of delusions could such a distinction be made. While Jaspers denied that genuine or *primary* delusions could be understood, he did describe a particular emotional state preceding the development of these delusions – *Wahnstimmung* (usually translated as delusional 'atmosphere' or delusional 'mood'), which will be discussed below.

Trauma and Delusions

Most contemporary psychological theories of delusions derive from Brendan Maher's (1974, 1988) argument that delusions can be understood as attempts to explain, or make sense of, strange or 'anomalous' experiences. For example, Freeman, Garety, Kuipers, Fowler, and Bebbington (2002) attempted to explain paranoid or persecutory delusions on the basis of a model proposed by Garety, Kuipers, Fowler, Freeman, and Bebbington

(2001). In their paper, Freeman et al. (2002) argue that a persecutory delusion is an 'attribution' or 'causal explanation' for events, deriving from a 'search for meaning' that reflects an interaction between 'psychotic processes, the pre-existing beliefs and personality of the individual, and the (often adverse) environment' (p. 336). They further note the importance of emotional disturbances '*prior* to [the development of] full symptoms' (p. 337, italics in original), and claim that anxiety states, possibly linked to experiences of trauma or early abuse, are particularly important for the development of delusions.

The evidence for a link between trauma and delusions, discussed in more detail in Chapters 9 and 16 of this book, was also emphasized in a recent review of delusions (Bebbington & Freeman, 2017). Here, the authors conclude, 'Disorders associated with delusional symptoms consistently occur in the context of a history of trauma: bullying, physical abuse, and sexual abuse' (p. 278). Emotional abuse and neglect have also been implicated. For example, one study found very high levels of emotional abuse and neglect in patients with schizophrenia and borderline personality disorder (BPD; Kingdon et al., 2010) – 92% moderate/severe levels in the BPD group, and 82% in the comorbid schizophrenia/BPD group.

A model for a specific pathway from early trauma to psychotic symptoms has been proposed in a recent paper by Amy Hardy (2017), which emphasizes the importance of three 'vulnerability' factors: (i) problems with affect regulation, (ii) episodic memory deficits, and (iii) biased personal semantic memory beliefs or appraisals. On the basis of earlier models, which argue that psychosis is associated with a 'weakened ability to integrate contextual information', Hardy suggests that trauma-based perceptual memory intrusions may form the basis for psychotic symptoms; she argues that these intrusions may occur 'in the absence of any episodic context, such that they are experienced as occurring in the "here and now" with no recollection of their link to past trauma' (Hardy, 2017, p. 9).

Affect, as noted by Hardy, is also clearly important to the development of psychotic symptoms. High levels of anxiety and depression, particularly in the prodromal (pre-delusional) stage, are common in persons who go on to develop psychosis (Yung & Jackson, 1999). Indeed, a large-scale prospective study of persons at 'high risk' for developing psychosis found 'considerable degrees' of anxiety and depression, particularly in the sub-group which actually *developed* psychotic symptoms (Cunningham Owens, Miller, Lawrie, & Johnstone, 2005, p. 390). Of note, anxiety and depression *decreased* with the onset of psychosis, suggesting that psychosis may serve to 'bind' or 'contain' overwhelming emotions.

Such findings are consistent with the theories of David Garfield (2009), who argues that psychotic symptoms, and particularly delusions, arise as attempts to deal with 'unbearable affect' associated with stressful or traumatizing life experiences, when no other means of coping is available. He advocates a form of psychotherapy of psychosis which involves identifying the life experiences underlying psychotic symptoms such as delusions and dealing with the associated painful emotions. Garfield describes cases in his book in which delusions disappear when the 'unbearable' emotions behind them are dealt with. Of course, such ideas are similar to those espoused by Jung and Bleuler more than 100 years ago (see Chapter 4 of this book).

So, on the basis of the above theories and research, delusions can be seen as explanations for 'anomalous' experiences, associated with strong emotions. These experiences may be traumatic in nature, and delusions may serve to contain or 'bear' the overwhelming affect.

Delusional Atmosphere

Jaspers (1913/1963), while claiming that genuine schizophrenic, or 'primary', delusions were 'psychologically irreducible', did describe an intense affective state preceding the development of these delusions, which he called *Wahnstimmung*. This state, typically translated as delusional 'mood' or 'atmosphere', is described in the following passage:

> We find that there arise in the patient certain primary sensations, vital feelings, moods, awarenesses … Patients feel uncanny and that there is something suspicious afoot. Everything gets a *new meaning*. The environment is somehow different – not to a gross degree – perception is unaltered in itself but there is some change which envelops everything with a subtle, pervasive, and strangely uncertain light. A living room which was previously felt as neutral or friendly now becomes dominated by some indefinable atmosphere. Something seems in the air which the patient cannot account for, a distrustful, uncomfortable, uncanny tension invades him … This general delusional atmosphere with all its vagueness of content must be unbearable. Patients obviously suffer terribly under it and to reach some definite idea at last is like being relieved from some enormous burden (Jaspers, 1913/1963, p. 98; italics in original).

Though Jaspers claimed that such experiences were unrelated to a patient's life, we will argue in this chapter that they could, in fact, be related to adverse early life experiences, but ones that cannot be retrieved as memories.

Memory

There is abundant evidence that memory systems, particularly autobiographical forms of episodic and semantic memory, and 'working' memory, are impaired in schizophrenia (see Chapter 17 of this book), and are associated with hippocampal deficits, strikingly similar to those arising from childhood adversity (see Chapter 10 of this book). These memory deficits have been directly linked with delusions (Brebion et al., 1999). To understand the possible relationship between memory systems and delusions, the impact of trauma on memory will first be considered.

Trauma and Memory

Chris Brewin, of University College London, has, for many years, been developing and refining a theory of post-traumatic stress disorder (PTSD) called *dual representation theory*, premised on the existence of two core memory systems – what were formerly called 'verbally accessible' and 'situationally accessible' memory (Brewin, Dalgleish, & Joseph, 1996), but which are now called contextualized representations (C-reps) and sensation-near representations (S-reps; Brewin, Gregory, Lipton, & Burgess, 2010). The central argument is this: while most memories are verbally accessible and are able to be consciously retrieved, memories encoded during experiences of extreme stress are more likely to be represented in imagery instead of in language.

Such experiences are typically retrieved under the influence of situational triggers, not by voluntary attempts at recall.

Brewin cites the work of Jacobs and Nadel (1985, 1999), who argue that multiple memory systems are differentially affected by stress. From a 1996 paper, Nadel and Jacobs claim:

> When memories are formed under intense stress, a critical component of normal memory formation – the hippocampus – is disabled, and memories without spatiotemporal content are created. At the same time, another component of normal memory function – the amygdala – can be potentiated, leading to stronger-than-usual memory for highly charged emotional events. When a person retrieves a traumatic event memory, the retrieved information is bereft of spatiotemporal context. Instead of being bound firmly to the past, this 'disembodied' event memory is conflated with the ongoing spatio/temporal frame (p. 459).

Brewin's position is somewhat less extreme, as he does not deny that autobiographical memories can be formed after stressful events but emphasizes a lack of integration between the memory systems.

> (D)uring a traumatic event the encoding of S-reps (perceptual memories) is strengthened, whereas the encoding of C-reps (contextualized episodic memories), and the connections between S-reps and C-reps, is weakened … Reminders of the trauma are likely to lead to the automatic retrieval of S-reps, with vivid, decontextualized images being experienced as the event happening again in the present (Brewin, 2014, p. 88).

The extensive literature on PTSD confirms that a core component of the disorder is the involuntary retrieval of memories that are experienced as occurring in the present, coupled with an inability to consciously recall parts of the trauma; typically, the same portions of the event that cannot be consciously recalled are experienced as flashbacks (Brewin, 2014). Indeed, Brewin argues that the essence of PTSD is a 'dissociation between perceptual and episodic memory for the trauma' (p. 75).

But what of memories occurring early in life, before the hippocampus is fully developed? What form might they take? Perhaps they may adhere more closely to the model proposed by Nadel and Jacobs (1996) above – emotional, feature-based memories for which no autobiographical contextual information exists. Indeed, Jacobs and Nadel have argued that anxiety disorders, particularly phobias and panic attacks, have their origin in very early stressful experiences, about which no autobiographical memories could be constructed (Jacobs & Nadel, 1985, 1999).

So, memories formed under extremely stressful conditions are poorly integrated into the autobiographical memory system and are experienced as powerful emotions with pronounced somatic and sensory components, which could be interpreted as an event occurring in the present. While adults may (but do not always) recognize these experiences as 'memories', even though they feel like they are occurring in the present, what do we know of children's experiences, and particularly infants? How do they seem to experience, and recall, emotional, interpersonal events?

Memory During Infancy

Most people, as adults, will not be able to report memories for events that happened before the age of three or four; this lack of autobiographical memory has often been called *infantile amnesia*. While infants cannot verbally describe their experiences, one must be careful about assuming that they have no episodic memory (Bauer, 2014). Some forms of memory must clearly exist from birth, since infants learn extensively during this time. Indeed, there is now considerable evidence that, in humans, memory capacity emerges early in the first year of life (Li, Callaghan, & Richardson, 2014). Three- and six-month-old infants recognize images of faces after 24 hours (Pascalis, De Haan, Nelson, & De Schonen, 1998), and nine-month-old infants demonstrate retention of individual components of multi-step action sequences over delays of one month (Bauer, Wiebe, Waters, & Bangston, 2001). The data from these and other studies converge to suggest that, during the first two years of life, infants' long-term memory capacity increases progressively.

In addition, while it has been previously argued that genuine autobiographical memories during the first two years of life cannot occur because of the immature state of the hippocampus (as posited by Jacobs and Nadel, 1985, for example), that position is beginning to be challenged. Although the hippocampus is immature in the first years of life, it is still engaged and responsive to experience (Alberini & Travaglia, 2017). Studies have suggested that, even before the second year of life, infants are able to differentiate between the 'who', 'what', and 'where' of events, abilities which are typically considered to require a functioning hippocampus. For example, using eye-tracking procedures, Kingo, Staugaard, and Krøjgaard (2014) report that three-year old children show clear non-verbal recognition memory for persons met once at the age of 12 months. Another study reported evidence that three-year-olds could recall some aspects of events they had been exposed to at nine months (Hirte, Graf, Kim, & Knopf, 2017).

Importantly, there is also research evidence that children (but not adolescents) are able to recall episodic events from infancy (Tustin & Hayne, 2010). Indeed, in the Tustin and Hayne (2010) study, memories of episodic events occurring during the first year of life accounted for over 20% of all early memories reported by the two groups - five-year-olds and eight to nine-year-olds. The authors asked the children to provide a memory from the past month, a memory from before the age of three and their 'earliest' memory. These memories were accurate (verified by a parent) and episodic in nature (i.e. 'We went to the circus and saw some elephants'); the children provided clear information about the 'who', 'what', 'where', and 'when' of an event. As such, these studies indicate that very young infants are potentially capable of encoding a proportion of their personal experiences from birth, thereby challenging previous perspectives on episodic infant memory (Mullally & Maguire, 2014; Tustin & Hayne, 2010). In sum, infants show clear non-verbal episodic memories in the absence of overt verbal (and sometimes behavioural) expressions of these memories. These memories remain accessible to children but, interestingly, not to adolescents. Such evidence has led Li et al. (2014) to conclude that so-called infantile amnesia is 'not due to a loss of the early-acquired memory from storage … [but] must be due to a retrieval failure' (pp. 136–137).

In addition, recent studies (Montirosso, Tronick, Morandi, Ciceri, & Borgatti, 2013; Montirosso et al., 2014) seem to indicate that infants' episodic memories might incorporate some form of *body memories*, which classically are considered part of implicit/

nondeclarative memory. *Body memories* are defined as memories that include physiological and bodily changes (e.g. variations in heart rate, peripheral/autonomic reactions, hormonal activity, or changes in facial expression; Pfeifer & Bongard, 2007), which may or may not be integrated into autobiographical memories. This could be particularly relevant with regard to an infant's episodic memories for social and emotional events, which has received much less attention than memory for emotionally neutral events and non-social cognition (e.g. imitation tasks).

Much of the stress infants experience in their daily lives is social in nature, but only a few studies have enquired how normal stressful social emotional events can affect memory, behaviour, and physiology over the first months of life. For example, Montirosso et al. (2013, 2014) found evidence that four-month-old infants showed episodic memory for a stressful event after 15 days. The authors used changes in behaviour (e.g. emotional negativity) and bodily changes (e.g. salivary cortisol concentration and cardiac vagal tone) as markers of long-term memory for a stressful social event (i.e. maternal unresponsiveness during the Still-Face paradigm). The changes in vagal tone activity and cortisol response observed during a second exposure to the Still-Face paradigm indicated that infants were remembering a previous similar social stress situation with their primary caregiver. Notably, infants did not show changes at the behavioural level. Thus, even when no signs of a memory are manifested on a behavioural level, episodic memories acquired by infants, even for a single stressful social event (i.e. maternal unresponsiveness), can be demonstrated physiologically.

There is also evidence for the long-term impact of infantile experiences on *body memory*, despite a lack of conscious recollection. In a study of adolescents, Niermann et al. (2015) used a stabilometric force-platform to analyse spontaneous body fluctuation in 14-year olds who were watching an adverse social stimulus (e.g. an angry face). Subjects who had demonstrated insecure attachment at 15 months of age manifested significantly reduced spontaneous oscillations (i.e. more 'freezing') at 14 years, suggesting that early adverse relational experiences were being remembered 'by the body' (Niermann et al., 2015). This means that early episodic memories, particularly of emotional or stressful experiences, could be embodied and that some somatic markers could be related to social emotional events (Damasio, 2003). In addition, there is evidence that stress increases the strength of infantile memories. Indeed, Li et al. (2014) claim, 'Early exposure to stress appears to alter the developmental trajectory of memory, accelerating the emergence of adult-like retention, leading to lasting behavioural expression of learned experiences' (p. 138).

In light of the above, evidence suggests that children could have memory for episodic events, even if they are unable to translate their preverbal memory into verbal descriptions. Thus, even if infants exhibit immature neural connectivity associated with episodic memory, there could be latent information that can be retrieved under certain circumstances later in life by emotional reminders (Alberini & Travaglia, 2017). In other words, early memories could leave at least a partial trace (i.e. latent memory) that continues to influence later functioning despite not being explicitly recalled (Li et al., 2014). Latent episodic-autobiographic memories could be encoded, stored, and recalled as interactional patterns between the infant and his social world. Given that these episodic-autobiographic memories will be intersubjective in nature, one could speculate that cuing of the original experience via the so-called *wwww* (e.g. implicit or 'situation-near') memories (i.e. 'who', 'what', 'when', and 'where' memories), or 'way' of an event (e.g.

people, emotions, spatial context, kinds of actions, emotional atmosphere) could enable the activation of such a memory trace. This appears to be particularly likely for highly stressful early events, leading Li et al. (2014) to conclude, 'aversive or traumatic early memories … persist in their implicit form, with their attendant consequences which are not attributed to a specific experience as that memory is not explicitly recalled' (p. 138).

Disorganized Attachment and Disrupted Parent–Child Communication

In addition, memories associated with early attachment experiences can be triggered later in life by the activation of the attachment system. Since the attachment system, and particularly the pattern known as disorganized attachment (DA), is covered in depth in the previous chapter (see Chapter 7 of this book), here we will focus on relational and communication disturbances associated with DA, and their connection to dissociation.

Mary Ainsworth developed attachment theory, following John Bowlby, in the 1970s, partly through an experimental procedure known as the 'Strange Situation' (Ainsworth, Blehar, Waters, & Wall, 1978). In this laboratory-based task, infants of between 12 and 18 months are observed in an unfamiliar room with toys, in the presence of their caregiver, and their response to two brief separations (during which a stranger enters the room) is noted. Based on these observations, Ainsworth and her colleagues proposed that several clear patterns of infant behaviour could be described. These are the optimal, known as 'secure' attachment, and two *insecure* patterns of attachment, avoidant and anxious/ambivalent, which are adaptations to less-than-ideal parenting behaviour. However, a number of infants could not be classified into one of these three categories. A careful analysis of videos from the Strange Situation over a period of years resulted in the proposal for an addition attachment pattern, called 'disorganized' attachment or 'disorganized/disoriented' attachment (DA; Duschinsky, 2015). It was proposed that DA resulted from the simultaneous stimulation of the *attachment* system along with the evolutionary-based *defence* system. This is described by Gumley and Liotti in the previous chapter (see Chapter 7 of this book) as follows:

> When exposed to frequent interactions with a helplessly *frightened*, *hostile* and *frightening*, or *confused* caregiver, infants are caught in a relational trap; their defence system motivates them to flee from the frightened and/or frightening caregiver, while at the same time their attachment system motivates them, under the influence of separation fear, to approach them (Chapter 7 of this book, italics in original).

This pattern develops not only when parents are overtly abusive (i.e. *frightening*), but also if they are experiencing unresolved trauma or loss – which may lead to them appearing *frightened* or *confused*. Gumley and Liotti (see Chapter 7 of this book) regard DA as resulting from the outcome of 'intersubjective experiences arising from disrupted affect-regulation within the infant–parent dyad (which) … may involve overt abuse, but can also be characterized by emotional *misattunement* and contradictory caregiving behaviours' (p. 100; italics in original). Such ongoing relational patterns indicate that the infant cannot rely on the parent to help regulate its physiological and emotional arousal – a

crucial developmental task. The resulting patterns of dysregulation likely become embedded in a child's self-perception and can be expressed through bodily memories (Hostinar, Sullivan, & Gunnar, 2014; Lanius, Vermetten, & Pain, 2010).

Attachment theory claims that attachment patterns generate internal working models (IWM) or *implicit core relational schemata* in the infant (Gumley and Liotti, Chapter 7 of this book), that provide patterns and expectations for the self and important others in relationships throughout life. In DA, an infant, exposed to a parent who appears frightened for no apparent reason, might conclude that there is an unknown danger in the room, and that the parent is helpless to protect them, or that they themselves are the cause of the parent's fear. They might also conclude, upon their parent's 'recovery', that they have somehow 'rescued' their parent (Dutra, Bianchi, Siegel, & Lyons-Ruth, 2009; Liotti, 2009). Liotti (2009) argues, therefore, that DA can lead to multiple, dissociated IWMs in the child, in which both caretaker and self could be represented by various combinations of perpetrator, victim, and/or rescuer.

A complementary perspective is taken by Lissa Dutra, who was involved in a longitudinal research study that focused on disrupted 'maternal affective communication' assumed to be associated with DA (Dutra, Bureau, Holmes, Lyubchik, & Lyons-Ruth, 2009). This study utilized not only the Strange Situation task, but also scales designed to assess direct mother–infant interaction in the laboratory and in the home as well. These early patterns of behaviour were then associated with dissociation scores at age 19 (see Chapter 21 of this book). In addition, childhood maltreatment was assessed between one and seven years old at regular intervals and by questionnaire at age 19. The strongest predictors of dissociative symptoms at age 19 (accounting for 50% of the variance) were 'disrupted affective communication' in the laboratory, and 'lack of positive affective involvement' and 'flatness of affect' in the home. The overall severity of childhood abuse did not predict dissociation at age 19, but the extent of verbal abuse (but not sexual or physical abuse) did.

However, the authors cautioned against linking their findings to the predication of dissociative disorders, noting that the average Dissociative Experiences Scale (DES) score in their sample (16.29) was relatively low – suggesting that it was unlikely any participants were manifesting a dissociative disorder. This level of dissociation in this study is actually closer to that found in schizophrenia spectrum disorders than in dissociative identity disorder (DID; Renard et al., 2017; Chapter 11 of this book).

The authors describe the mother's behaviour in the Strange Situation task in the case of a boy classified as DA in infancy who demonstrated (relatively) high levels of dissociation at age 19.

> 'Upon the first reunion, the mother enters the room but neither approaches nor greets her child … In the second reunion, the mother … does not try to comfort her distressed child but asks for a kiss and wants him to tell her about his activities when she was out of the room' (Dutra, Bianchi, et al., 2009, p. 88).

Dutra, Bureau, et al. (2009), on the basis of their research, conceptualize dissociation in a strikingly relational way as:

> a way of organizing thought and attentional processes in response to implicit social injunctions from primary attachment figures 'not to know' …. (S)uch

> injunctions about what can be included in a dialogue with others, especially very early in development, are communicated implicitly rather than explicitly, through the caregiver's differential responsiveness to different kinds of child communications … This is … a way of mentally accommodating to intense social pressures not to acknowledge pain and distress within a set of caregiving relationships that are vital for survival. The attachment relational context imbues both the caregiving transactions and their internalized mental representations with the intense emotional valences characteristic of defensive responses. This valence does not come simply from an intrapsychic need not to know, but also from a relational communication not to speak (p. 388).

The Retrieval of Early Life Memories

While there is no research that documents the capacity to recall, in adulthood, experiences dating from the first years of life, there are many anecdotes to this effect; for example, in psychotherapy, persons sometimes describe somatic sensations that turn out to be body memories of early experiences. John Bowlby, in his remarkable paper 'On knowing what you are not supposed to know and feeling what you are not supposed to feel' (Bowlby, 1988), reports many such cases – several involving a child witnessing a parent attempting or committing suicide.[2] In these situations, the surviving parent often denies the child's perceptions completely, or insists on an alternative explanation for the events.

In one such case, reported in Cain and Fast (1972), a therapist is treating a young man who became depressed and suicidal after the breakup of a relationship. Among his symptoms were various odd bodily sensations, including that of choking. Based on this, and associations and comments his patient made during the sessions, the therapist wondered whether the young man had ever witnessed his mother attempting suicide. The patient immediately broke down in tears as he recalled that his mother attempted to hang herself when he was quite young. When the therapist contacted the patient's father, he admitted that the memory was accurate, and that the incident, one of many suicide attempts made by the mother, occurred when the patient was not yet three years old. The father had insisted, whenever the child tried to talk about the incident, that he (the child) had imagined or dreamed it.

Another example, involving an even younger child, comes from the psychoanalyst William Niederland, as reported to Alice Miller (1984). Niederland states that a patient had told him a dream. The content of the dream, as reported in Miller (1984), is simple – that he was 'lying in bed at the North Pole; he became frozen solid in bed, and then some people came in' (p. 237). As he said this, Niederland told Miller, the patient glanced at the door in a manner that made him think of a child in bed expecting adults to enter his room. He speculated, with the patient, that the dream might relate to some early childhood experiences.

Later that day, Niederland received an irate phone call from the patient's mother, berating him for 'revealing her secret' to the son (presumably, the patient had asked his mother about childhood experiences similar to the dream). What was revealed was the following – when he was eight months old, the patient was left in a room with an open window on a very cold night. He screamed continuously, but his parents did not come

in; they did not realize that the window was open and believed they would be 'spoiling' their child by responding to his cries. In the morning, he was discovered near death; he was hospitalized, treated for pneumonia, and recovered. The parents never discussed this incident with their son, but, in some way, his body remembered; the dream presented the details accurately enough – his bed, the cold – and his gestures reminded Niederland of a child desperately waiting for adults to rescue him.

Many other examples can be given, and not only in the context of therapy. Thus, there is clear colloquial evidence that powerful early experiences can be recalled, but not in narrative form. Could such experiences form the basis for delusions?

The Schreber Case: Delusions and Early Childhood Experiences

> Freud interprets this man's delusions and persecution complex as the manifestation of his warded-off homosexual love for his father without bothering to find out what his father had done to his child earlier. Morton Schatzman's (1973) study of the father's background and personality reveals the son's paranoia to be only a thinly disguised recounting of the tragedy of his childhood. Thus, in his essay about Schreber, Freud was actually describing merely the last act of a drama about whose plot … he seemed to know nothing (Alice Miller, 1984, p. 71).

> (T)hese findings give support to the hypothesis advanced by Niederland that the paranoid delusions of Judge Schreber, on which Freud based his theory of paranoia, were distorted versions of the extraordinary pedagogic regime to which the patient's father had subjected him from the early months of life (Bowlby, 1988, p. 117).

Daniel Paul Schreber (1842–1911) is generally considered the most famous psychotic or schizophrenic patient in history. The reason for this is that he published, in 1903, a remarkable document, called *Memoirs of my Nervous Illness*, which described in great detail the delusions and hallucinations he experienced during a 10-year hospitalization in Germany. Since then, this manuscript has been analysed by numerous prominent psychiatrists and thinkers, in support of one or another 'theory' of psychosis, paranoia, or schizophrenia. Sigmund Freud was among the first, publishing his *Psycho-Analytic Notes on an Autobiographical Account of a Case of Paranoia* in 1911.

Schreber's *Memoirs* are based on his psychiatric hospitalization in various institutions around Leipzig (1893–1902), which was apparently triggered by his appointment, two months previously, as the presiding judge for the Supreme Court in the German region of Saxony (i.e. the highest judge in that German state). He reports that he was burdened by the amount of work his new position entailed, and was sleeping poorly; shortly before his hospitalization, he awoke from a dream with the thought that it would be 'nice' to be a woman and for a man to have sexual intercourse with him.

In this manuscript, which was partly written as an attempt to argue for his release from the hospital, Schreber describes in detail an extensive range of delusions and hallucinations. He believed that his doctor (Paul Flechsig) had access to his mind, via a

special 'nerve language' that humans were unaware of, and that Schreber was the last genuine human being alive.

Central to his delusional system was the belief that God was trying, over an extended period of time, to turn him into a woman so that he could have sex with him, and that the success of this process was crucial to saving the world. Schreber referred to this process as his 'unmanning' or, strikingly, 'soul murder' (*Seelenmord*). He also frequently wrote about 'divine rays' emanating from God, which produced various 'miracles' on his mind and body. Many of these miracles resulted in painful or uncomfortable physical sensations; they were carried out by tiny people, who he called 'fleetingly improvised men' – because they would appear and disappear quickly. As one example, Schreber spoke of the 'compression-of-the-chest-miracle', which consisted of the 'whole chest wall being compressed, so that the state of oppression caused by the lack of breath was transmitted to my whole body' (Schreber, 1903/1955, p. 133).

Freud's Analysis

Sigmund Freud analysed Schreber's paranoia and delusions as resulting from 'repressed homosexual' wishes toward his father, represented by God and Dr. Flechsig. The process of transference is alluded to here; Freud speculates that Schreber was 'reminded of his brother or father by the figure of the doctor, he rediscovered them in him' (Freud, 1911/1958, p. 47). Freud had already written about the transformation of wishes into fears by the unconscious during dreaming, a process that he believed served to keep one's 'true' motivations hidden from consciousness. Similarly, in Schreber's case, Freud argued that his 'love' for his father was transformed into 'hate' in order to disguise it, then further transformed in terms of both the object and the direction into persecution of Schreber *by* God or Flechsig. In addition, however, his 'fantasy' of being transformed into a woman was more directly representative of his *wish* for his father. The complicated connection between hate and sexuality in Schreber's delusions can be seen in this paraphrase by Freud: 'The rays of God abandon their hostility as soon as they are certain that in becoming absorbed into his body they will experience spiritual voluptuousness' (p. 30).

Freud's analysis of the Schreber case has been very influential and contributed to the psychoanalytic view of paranoia for many years. But what Freud and many other commentators ignored was Schreber's family background and in particular his father, Daniel Gottlob Moritz Schreber, a highly influential German physician and pedagogue.

Schreber's Father

Moritz Schreber, as he was generally called, was an influential physician and pedagogue. He was very well known for promoting physical activity in the young, as a means of maintaining health, and wrote a series of books and manuscripts on therapeutic gymnastics, along with physical work, education, etc. (Niederland, 1959, 1960; Schatzman, 1971). But Moritz Schreber was also well known for a series of books he wrote on the 'proper' way to raise children, which included techniques to instil complete obedience, procedures for ensuring proper posture, attention, etc.

For example, Moritz Schreber recommends the following response to a child's crying (if there seems to be no physical cause for it):

> One has to step forward in a positive manner: by quick distraction of the attention, stern words, threatening gestures, rapping against the bed … or when all of this is of no avail – by moderate, intermittent, bodily admonishments [i.e. physical striking] … Such a procedure is necessary only once or at most twice and – one is master of the child forever. From now on a glance, a word, a single threatening gesture, is sufficient to rule the child (M. Schreber, 1858, pp. 60–61, cited in Schatzman, 1971, p. 192).

And, from the same document, 'Once the childish mind is completely penetrated by love and respect and all the warm rays ["Strahlen" – the same word used in Schreber's delusions] which gush forth from them, the will of the child is ruled more and more from this perspective and is led gently toward the pure and noble direction' (p. 235, cited in Schatzman, 1971, p. 202).

Most strikingly, Moritz Schreber devised a series of interventions that he thought would physically toughen a child, such as cold baths from the age of three months. He also created physical restraint contraptions to maintain a child's posture while they were sitting, standing, or sleeping. For example, the *Geradhalter* ('straight holder') was an iron cross-bar which pressed against the collar bones and front of the shoulders to prevent forward movement or crooked posture when seated (Schatzman, 1971). While it would be natural, in any case, to assume that Moritz Schreber used these contraptions on his own children, he explicitly states that – with regard to the *Geradhalter* and a few others – he 'tested them out' on his own children.

Schatzman and DeMause's Analyses

Morton Schatzman (1971, 1973), an American psychiatrist, building on William Niederland's earlier papers, compared the delusions of Schreber with the pedagogical writings of his father. Numerous passages from the *Memoirs* are set next to Moritz Schreber's recommendations for how to treat children; the similarities are striking (all of the following quotations are from Schatzman, 1971).

For example, Schreber describes 'miracles' of heat and cold, in which he experiences powerful bodily sensations of extreme temperatures, along with associated sensations (such as facial flushing, numbness of his extremities); he writes that the purpose of these miracles was of 'preventing the natural feelings of bodily well-being' (Schreber, 1903/1955, p. 145). Another recurrent experience, described as the 'coccyx miracle', which involves pain in the lowest vertebrae, is designed to 'make sitting or even lying down impossible'. Schreber has the experience of 'not being allowed' to stay in any one position for any length of time and complains that the 'rays' did not appreciate that human beings 'must be *somewhere*' (p. 139, italics added). Notably, his father argued that children should frequently be forced to change their bodily positions if they cannot stay perfectly straight (claiming that their spine would be harmed otherwise) – for example, from a seated to an 'absolutely still, supine' position (M. Schreber, 1858, p. 100).

Following many of these examples, Schatzman concludes that Schreber's delusions are based in experiences from his early childhood. He states:

> Schreber suffers from reminiscences. His body embodies his past. He retains memories of what his father did to him as a child; although part of his mind knows they are memories, 'he' does not (Schatzman, 1971, p. 188).

Lloyd DeMause, in a paper called *Schreber and the History of Childhood*, goes even further, turning Freud's analysis on its head, by wondering whether Schreber's delusions suggest that he was *actually* sexually abused by his father. While indicating that there is no corroborating evidence that this occurred in Schreber's case, DeMause claims there is historical evidence that sexual and physical abuse of 'little children' was 'quite common' in Germany at the time of Schreber's birth (DeMause, 1987, p. 426). For example, Schreber's definition of 'soul murder' as being 'unmanned' for the 'sexual satisfaction of a human being', of having 'female buttocks on my body … whenever I bend down', or of being forced by God to be 'a woman in the height of sexual delight' are all seen as indications that there might have been actual anal intercourse with his father. Other delusions are seen as evidence for oral sex and masturbation:

> I received souls or parts of souls in my mouth, of which I particularly remembered distinctly the foul taste and smell which such impure souls cause in the body of the person … On some nights, the souls finally dripped down on to my head … The nerves of my head … were covered with a sort of paste … If I wiped them off my eyes with a sponge, it was considered by the rays as a sort of crime against God's gift (Schreber, 1903/1955, pp. 92, 84, 136, 138, cited in DeMause, 1987).

Niederland, Schatzman, and DeMause's arguments that Schreber's delusions point back to actual abusive experiences from his childhood have been criticized by other interpreters. But such interpretations are consistent with some of John Bowlby's ideas and with the theories of David Garfield (2009).

Eugen Bleuler, who created the concept of schizophrenia, wrote a critical review of Freud's Schreber analysis, in which he questioned the role of libido (Freud's sexual-based psychological energy). In his critique, Bleuler wondered:

> 'Couldn't it be that (Schreber's) recurrent fantasy of the end of the world developed through the loss of the usual coherence of perceptions and memories, which certainly plays a role in schizophrenia, rather than through the retraction of libido?' (Bleuler, 1912, p. 347, translation by Sünje Matthiesen).

'The loss of the usual coherence of perceptions and memories' sounds very much like implicit or bodily memories described above as common after trauma or in early childhood. Thus, it appears that Bleuler is suggesting that Schreber's delusion of the imminent 'ending of the world' might be related to memories which are not recognized as such. This position, by the creator of the concept of schizophrenia, is in essence the same as the one espoused here – that Schreber (following the stress, and perhaps psychological implications, of gaining a highly respected judicial position) began recalling

some intensely emotional memory-related perceptions from early childhood which he did not recognize as memories but created delusions around them instead.

But what purpose could this possibly serve?

Parent–Infant Communication and the Double Bind Theory of Schizophrenia

The Double Bind Theory of Schizophrenia

A paper was published in 1956 that first became famous, and then infamous, because it focused on the role of the family, and particularly the relationship between mother and child, in providing the foundation for symptoms of schizophrenia later in life. With the rise of medical psychiatry and the emphasis on genetics in the 1960s and 1970s, any attempt to implicate family dynamics in the development of schizophrenia was widely disparaged – as unscientific 'family blaming' for an illness which was obviously a 'brain disease'.

The paper was called *Toward a Theory of Schizophrenia* (Bateson, Jackson, Haley, & Weakland, 1956) and the theory first presented there was called the *double bind*. Gregory Bateson was an anthropologist based at Stanford University in California, and was interested in communication and systems theories and in cybernetics. His colleagues were experts in family therapy, hypnosis, and philosophical logic. The paper came out of a multi-year research project, which involved observations of patients diagnosed with schizophrenia and their parents in therapy (separately and together), audio-recordings of therapy sessions with schizophrenia patients, and oral and written reports of intensive psychotherapy with schizophrenia patients. In addition, the researchers studied mothers interacting with their disturbed young children, whom they considered to be 'presumably preschizophrenic' (p. 262).

In the first paragraph, the authors state:

> From this theory [of 'logical types'] and from observations of schizophrenic patients is derived a description, and the necessary conditions for, a situation called the 'double bind' – a situation in which no matter what a person does, he 'can't win'. It is hypothesized that a person caught in a double bind may develop schizophrenic symptoms. (p. 251)

In essence, the double bind theory claims that a regular pattern of disturbed communication between mother (typically) and child, from infancy on, leads to later disturbed 'schizophrenic' thinking and behaviour. The researchers did not think that childhood traumatic experiences (in the usual sense) were to blame for the schizophrenic symptoms, but that 'characteristic sequential patterns' of interaction (p. 253), over, and over again, were at fault.

They describe 'double binds' as arising from repeated interactions in an intense relationship, such as a parent–child relationship, in which it is 'vitally important' that communication be 'discriminated accurately', so that there may be an appropriate response (p. 253). The essential conditions consist of:

1) A primary *negative injunction* – a punishment or threat of punishment: 'either the withdrawal of love or the expression of hate or anger – or most devastating – the

kind of abandonment that results from *the parent's expression of extreme helplessness*' (p. 253, italics added)

2) A secondary injunction denying the first, usually expressed non-verbally via posture, gesture, tone of voice, etc.
3) A tertiary injunction prohibiting comment on the contradiction or escape from the relationship. The authors note, however, that a formal prohibition from commenting on the situation might be unnecessary, since the other two levels involve 'a threat to survival'; further, if the double binds are imposed during infancy, 'escape is naturally impossible'. (p. 253)
4) Over time, once the person learns to perceive his or her world in double bind terms, only a part of the double bind 'sequence' is necessary to 'precipitate panic or rage', and thus, schizophrenic symptoms.

The authors provide a vivid example in the text from their observational data:

> A young man who had fairly well recovered from an acute schizophrenic episode was visited in the hospital by his mother. He was glad to see her [it is assumed] and impulsively put his arm around her shoulders, whereupon she stiffened. He withdrew his arm and she asked, 'Don't you love me anymore?' He then blushed, and she said, 'Dear, you must not be so easily embarrassed and afraid of your feelings'. The patient was able to stay with her only a few minutes more and following her departure he assaulted an aide (p. 259).

Consistent with the above example, the authors argue that these patterns of communication arise because the mother feels threatened when approached by her child and manifests hostile or withdrawing behaviour. But she cannot acknowledge these behaviours (or would be a 'bad parent'), so must simulate affectionate and loving behaviour. Thus, in order to maintain closeness with the parent, the child must deny (some of) his perceptions, as well as suppressing the rage or anger he would likely feel. Ongoing interactions of this form lead to confusion not only between what is real and what is imagined (see Chapter 23 of this book), but also between what is part of me and what comes from other people (i.e. a blurring of the public/private boundary), a key aspect of Schneider's first-rank symptoms of schizophrenia (see Chapter 4 of this book). One example of this is seen in a brief vignette from the paper in which a mother, who feels hostile toward her child, says 'Go to bed, you're very tired and I want you to get your sleep!' The underlying hostility is expressed non-verbally but is contradicted by the expressed concern of the mother for the child's welfare, which includes her telling the child what (she claims) he is feeling (he may, or may not, have actually *been* tired).

While the authors of the double bind paper are primarily arguing that disturbed language and thinking in schizophrenia may be an expression of the double bind ('he must live in a universe where … events are such that his unconventional communicational habits will be in some sense appropriate', p. 253),[3] the genesis of bizarre behaviour and delusions can occur in the same way. For example, the authors describe an incident with a mother, grandmother, and seven or eight-year old daughter, in which the grandmother threw a knife in rage which barely missed the young girl. The mother did not respond

to the grandmother, but ushered her daughter out of the room, saying, 'Grandmommy really loves you!' As a young adult, while psychotic, the daughter appeared to take 'great delight' in throwing objects at her mother and grandmother, while they 'cowered in fear' (p. 260).

The bind that the child is in is 'doubled' because they are 'punished' if they respond to one message and not the contradictory message, *and* because they are *not allowed to comment* on the initial bind in which they have been placed. The researchers themselves wondered whether psychosis may develop partly as an attempt to deal with double binds, to 'overcome their inhibiting and controlling effect' (p. 261). Indeed, one can well wonder whether psychosis, and in particular delusions, could *subvert* the double bind by, as in the last example above: i) allowing for the expression of forbidden affect and forbidden behaviours while ii) allowing the person to deny intent because of the psychotic state.

Family Communication and Psychosis

While the *double bind* theory has been disparaged and ignored for most of the past half-century, similar concepts, such as that of *expressed emotion*, have been the focus of research. The concept of 'expressed emotion' generally refers to the notion that higher levels of expressed emotion in a family (typically, hostile communication from the parents to the adult psychotic child) lead to worse outcome and more frequent relapses into psychosis (Butzlaff & Hooley, 1998). The research in this area generally does not look at the initial *onset* of psychosis, and thus avoids consideration of the possibility that such patterns of interaction may play an etiological role in psychosis.

An alternate concept, parental *communication deviance* (CD), which is similar to the double bind, does however consider this possibility. A meta-analysis of research on CD and psychosis, which was conducted largely in the 1970s and 1980s, was published a few years ago (de Sousa, Varese, Sellwood, & Bentall, 2014). In that paper, CD is defined, with reference to Wynne (1981), as: 'a form of intrafamilial communication that is vague, fragmented, and contradictory and that compromises the development and sharing of meaning between the parent and the offspring, leading to the consequent breakdown in communication' (p. 756). The authors analysed 20 studies utilizing a range of methodologies that met their inclusion criteria and found a 'large' overall pooled effect size (Hedges' $g = 0.97$) indicating that CD was 'highly prevalent' in the parents (mother more than father) of psychotic offspring. They also argued that it was more likely that CD was a *cause* of psychosis rather than vice versa, as prospective and adoption studies demonstrated that 'CD in the parent *precedes* the development of psychosis in the offspring by many years' and – even more impressively – that high-risk children did not develop psychosis when exposed to 'healthy communication' styles in their adoptive families (p. 763, italics added). The authors speculated that 'continuous exposure' to CD in early childhood might lead to the 'internalization' of these communication patterns, resulting in later psychotic experiences (p. 757).

Thus, while research focusing on family communication styles as a cause of psychosis have fallen out of favour, a review of the literature supports their importance. Such research is consistent with the notion that the concept of the double bind may have validity and could lead to the later expression of psychosis.[4]

Discussion and Integration

Delusions, the paradigmatic indication of psychosis, have long been viewed as *incomprehensible* phenomena – incapable of being understood and, by inference, unconnected to a person's life experiences. But yet, to paraphrase Shakespeare, there may still be 'method' in such madness.

Most important theories of delusions today view them as deriving from a person's attempt to make meaning – to explain strange things that they are experiencing. Some theorists, such as Bebbington and Freeman (2017) and Hardy (2017)), explicitly recognize that delusions may be related to trauma; further, delusions may represent or symbolize aspects of adult traumatic experiences, as a component of PTSD or a dissociative disorder (see Chapters 16 and 19 of this book). But the extent to which delusions may arise from early childhood, even infantile, experiences, has yet to be fully appreciated.

The reasons for this are manifold. First of all, there is an ongoing reluctance to suggest that parental practices may play a role in the development of delusions or schizophrenia. This bias, often referred to as 'parent blaming', is reinforced by the overwhelming emphasis on brain research in schizophrenia studies (but with little merit; see both the introduction and Chapter 10 of this book). Secondly, early childhood experiences are cloaked in secrecy – partly because only family members, and often only a parent and child, are present, and partly because adolescents and adults (but perhaps not children; Tustin & Hayne, 2010) cannot recall such experiences in a verbal narrative form (i.e. Brewin's 'C-reps'). But it is now clear, based on creative research with infants, that they *do indeed* remember experiences – particularly relationally-based ones – and recall stressful experiences better than non-stressful ones (Li et al., 2014). However, since these experiences are not embedded in a verbal narrative, they are re-experienced solely on the basis of situational triggers (Brewin's 'S-reps'), or by the activation of the attachment system (Chapter 7 of this book).

In addition, powerful disturbing interactions between parent and child that occur repeatedly, whether they are characterized as 'disorganized attachment', 'communication deviance', 'disruptive affective communication', or 'the double bind' (concepts which appear formally similar and which generate strikingly similar vignettes)[5] are likely stored as bodily memories, perceptual memories, or 'emotional' memories, which can be retrieved later in life. When this occurs, similar to that which has been documented in PTSD, memories are retrieved without 'spatiotemporal context' and are thus 'conflated with the ongoing spatio/temporal frame' instead of being 'bound firmly to the past' (Nadel & Jacobs, 1996, p. 459).

It is the premise of this chapter that such powerful, confusing, affective experiences may be interpreted delusionally. Recall Jaspers' (1913/1963) description of 'delusional atmosphere', as a 'distrustful, uncomfortable, uncanny tension' (p. 98), which he thought (and others have agreed, see Mishara & Fusar-Poli, 2013) formed the basis of genuine ('primary') delusions.

One can easily imagine such a state being experienced by infants demonstrating a 'disorganized/disoriented' attachment pattern, or by some of the infants described in the Dutra longitudinal study. Indeed, Sigmund Freud, from a purely theoretical perspective, argues that feelings of 'uncanniness' ('Unheimlich' – the same word used by Jaspers in describing *Wahnstimmung* above) result from the re-emergence of 'secretly

familiar' early infantile experiences in an unfamiliar adult context (Freud, 1919/1955, p. 245; see also Moskowitz, Nadel, Watts, & Jacobs, 2008). In addition, the infantile 'explanations' of early experiences associated with disorganized attachment may provide the foundation for paranoid or grandiose delusions – 'a powerful, unknown *danger* is present', or 'I – who have caused such fear in my mother (or *saved* her) – must have extraordinary *powers*'. In addition, other delusions related to a blurring of the public/private boundary (e.g. thought broadcasting – 'private' becomes 'public'; delusions of reference – 'public' becomes 'private') may be related to repeated transgressions of self/other boundaries in childhood – chronic invalidation of emotional experiences, being 'told' what one is feeling or thinking, etc. (see also Chapter 23 of this book).

The possibility that such early experiences can be recalled later in life is clearly evident in some of the clinical vignettes reported here, as well as in the Schreber case – some of whose delusions match the (likely) experiences of his childhood to a shocking degree. Interestingly, Morton Schatzman (1971), in writing about Schreber and his father, invoked the 'double bind' theory (though he did not reference Bateson et al., 1956): 'It is as if Schreber is forbidden by a rule to see the role his father has played in his suffering, and is forbidden by another rule to see that there is anything he does not see' (p. 188). According to Dutra, Bureau, and colleagues (2009), based on their observations of early parent–infant interactions, this powerful injunction is not only conveyed as an 'intrapsychic need *not to know*' but also as a 'relational communication *not to speak*' (p. 388, italics added).

While 'double bind' interactions, or disrupted maternal–child communication patterns, may provide the memorial foundation for psychosis in later life, it is also possible that delusions may serve as a creative solution *for*, or escape *from*, the double bind (a possibility raised by the double bind authors themselves). That is to say, delusions may allow for the expression of genuine emotions and/or actions that could not be openly expressed because of external and later internal (psychological) binds in which a person finds themselves. But delusions may also serve to ensure (in the case of later traumas) that traumatic memories do not come to consciousness – as those memories would be too painful to face openly (as, for example, in the vignettes in David Garfield's (2009) book, or in Martin Scorsese's (2010) film 'Shutter Island'). And this may particularly be the case for those individuals with limited dissociative capacity – those who lack the ability to segregate or compartmentalize painful trauma memories in one part of their personality.

Since, however, it cannot be the case that *all persons* who have such childhood experiences go on to develop delusions, or that *all delusions* have their basis in such experiences, other factors must be relevant. These may be: (i) a particular developmental trajectory from disorganized attachment to dismissing attachment (Gumley & Liotti in Chapter 7 of this book), (ii) specific mentalization deficits (Chapter 7 of this book), (iii) problems with affect regulation (Chapter 7 of this book; Hardy, 2017), (iv) schizotypy (Chapter 15 of this book), (v) episodic memory deficits coupled with biased personal semantic memory beliefs or appraisals (Hardy, 2017; Moskowitz et al., 2008), (vi) limited dissociative or self-hypnotic capacities (Moskowitz, Read, Farrelly, Rudegeair, & Williams, 2009; Chapter 14 of this book), or some combination of the above.

Nonetheless, the possibility that at least some delusions have their genesis in early relational-based experiences should not be dismissed, based of the research and clinical domains explored here. This raises the question as to whether delusions could be treated

by reconnecting them to the life experiences from whence they came. While this is what David Garfield contends, with very early life experiences this may be quite difficult or impossible. Even so, overwhelming emotional experiences, or strange bodily sensations, linked to delusions should be considered to be potentially associated with early life experiences. Such a novel clinical hypothesis might bring, at least in some cases (such as those reported by Bowlby and Niederland), unexpected relief. And, at the very least, the purported incomprehensibility of delusions and, by extension, of psychosis needs to be re-examined.

By continuing to insist that delusions represent nothing other than the expression of a diseased brain, biologically-oriented psychiatry is only serving those in society who do not wish to face the pain and suffering experienced by very young children. As raised here, there is the very real possibility that at least some delusions are symbolic crystallizations, serving multiple purposes, of chronic distressing experiences between parents and their children; to call the extreme end of such experiences 'soul murder' is, perhaps, not a delusion at all.

Notes

1 Almost all aspects of this definition have been criticized – that delusions must be 'beliefs', that they cannot be true, and that they are immune to counterarguments (Gipps & Fulford, 2004; Rodrigues & Banzato, 2010; Stephens & Graham, 2004). This debate will not be recounted here, however, because it is not relevant to the goals of this chapter.
2 Other cases include psychotic symptoms in adulthood which appear to have their basis in childhood experiences.
3 A beautiful example of this comes from a paper by Michael Robbins (2002), called 'The language of schizophrenia and the world of delusion'. He includes a transcript of a therapy session with a woman diagnosed with schizophrenia, where he is trying to understand why she communicates in a confusing way with people she cares about, vaguely asking for their help while hiding from them her distress (*A* for 'analyst' and *P* for 'patient'). *P*: 'Some people try to intimidate people; I *intimate* people'. *A*: 'What do you mean?' *P*: 'Relationships are too difficult, so I word my way into a relationship with letters. I'd like to work my way into your hearts without working my way in, and without mentioning things that would work my way out of your hearts' (pp. 391–392).
4 Of interest, Bateson et al. (1956) also seemed to consider the possibility of DID developing as a result of the double bind: '(I)n an impossible situation it is better to shift and become somebody else or shift and insist that he is somewhere else. The double bind cannot work on the victim, because it is not he and besides he is in a different place' (p. 255).
5 One noteworthy parallel between DA and the double bind is the latter's observation that a parent's 'expression of extreme helplessness' is the most devastating threat to a child; likewise, the expression of parental helplessness is considered in DA to be overwhelming to a young child.

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Part II

Research Perspectives

9

Childhood Trauma in Psychotic and Dissociative Disorders

James G. Scott, Colin A. Ross, Martin J. Dorahy, John Read, and Ingo Schäfer

During the last 30 years, a large body of research has furthered our understanding of the relationships between early adversity and psychological difficulties later in life. While the focus of much of this initial research had been on the role of sexual and physical abuse, increasingly other adversities, including emotional abuse, neglect, bullying, and loss, have been emphasized (e.g. Felitti et al., 1998; Ferguson & Dacey, 1997; Kessler et al., 2010; Mullen, Martin, Anderson, Romans, & Herbison, 1993; Norman et al., 2012; Rutter & Maughan, 1997; Silverman, Reinherz, & Giaconia, 1996; Teicher, Samson, Polcari, & McGreenery, 2006). After controlling for other psychosocial risk factors, childhood trauma has been associated with the development of most mental health problems, including mood and anxiety disorders, eating disorders, personality disorders, dissociative disorders, substance dependence, and psychosis (Green et al., 2010; Janssen et al., 2004; Kendler et al., 2000; Lardinois, Lataster, Mengelers, Van Os, & Myin-Germeys, 2011; MacMillan et al., 2001; Nelson et al., 2002; Norman et al., 2012; Scott, Smith, & Ellis, 2010; Varese et al., 2012). Moreover, childhood trauma is associated with an array of additional problems in those attending mental health services, including somatic complaints, interpersonal problems, and self-harm (Allen, 2001; Gladstone et al., 2004; Hien, Cohen, & Campbell, 2005). These problems exist across diagnostic boundaries and frequently lead to difficulties in assigning specific diagnoses.

Other research suggests that, in patients receiving the same diagnosis, trauma is a factor which impacts the success of therapeutic interventions (Nanni, Uher, & Danese, 2012; Nemeroff et al., 2003; Pirard, Sharon, Kang, Angarita, & Gastfriend, 2005). Examining the role of childhood trauma in patients with severe psychopathology thus seems important for both furthering the theoretical understanding of mental disorders and developing effective treatments. While childhood trauma is understood to be a major aetiological factor for dissociative disorders, it had long been a neglected issue in patients with psychotic disorders (Bentall, 2006; Duhig et al., 2015; Read & Bentall, 2012; Read & Ross, 2003). However, during the past two decades, the role of childhood trauma in those with psychosis has gained much attention (Read, Van Os, Morrison, & Ross, 2005). This chapter aims to give an overview of findings on childhood trauma in patients diagnosed with psychotic disorders and dissociative disorders.

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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Childhood Trauma in Patients with Psychotic Disorders

Existing evidence consistently shows a high prevalence of trauma in people with psychosis. In the first comprehensive review (Read et al., 2005), the majority of patients of both sexes living with psychosis had experienced abuse in childhood. Childhood sexual abuse (CSA) was reported by 48% of female patients and 28% of male patients. Childhood physical abuse (CPA) in childhood was experienced by 48% of female patients and 50% of male patients. A subsequent review (Morgan & Fisher, 2007) recalculated the averages on the basis of 20 studies in which all of the subjects had been diagnosed with a psychotic disorder. Across these more diagnostically homogeneous studies, the estimate of sexual abuse in females was only slightly lower (42%), and remained the same in male patients (28%). The estimate of physical abuse was 35% in female patients and 38% in male patients. At least one form of abuse (CSA or CPA) was found in 50% of patients diagnosed with schizophrenia, irrespective of gender.

A smaller number of studies of people living with psychosis included other forms of childhood maltreatment, such as emotional abuse and neglect. In these studies, high rates of emotional abuse and neglect were found, in addition to high rates of CPA and CSA (Compton, Furman, & Kaslow, 2004; Garno, Goldberg, Ramirez, & Ritzler, 2005; Holowka, King, Saheb, Pukall, & Brunet, 2003; Honig et al., 1998; Schenkel, Spaulding, DiLillo, & Silverstein, 2005). The weighted average prevalences of childhood emotional abuse, emotional neglect, and physical neglect among people diagnosed with schizophrenia were 47, 51, and 41%, respectively (Read, Fink, Rudegeair, Felitti, & Whitfield, 2008). The prevalence of these forms of maltreatment varied widely between studies, largely dependent on the definitions used. More recently, in a study of patients with early psychosis attending community clinics, emotional, physical, and sexual abuse were reported by 54, 23,and 28% of patients, respectively, while 49 and 42% of patients reported emotional and physical neglect, respectively (Duhig et al., 2015). Females were significantly more likely than males to be exposed to emotional and sexual abuse. There is now consistent evidence that the prevalence of all forms of maltreatment in childhood in those diagnosed with psychotic disorders is high.

While studies in clinical samples do not allow definitive conclusions about the nature of the association between childhood trauma and psychosis, several recent population-based studies suggest that childhood trauma is a likely causal factor for psychosis (Cutajar et al., 2010; Janssen et al., 2004; Lataster et al., 2006; Shevlin, Dorahy, & Adamson, 2007a; Spauwen, Krabbendam, Lieb, Wittchen, & Van Os, 2006; Whitfield, Dube, Felitti, & Anda, 2005). Further evidence comes from studies with a focus on lifetime trauma (Bebbington et al., 2004; Scott, Chant, Andrews, Martin, & McGrath, 2007; Shevlin, Dorahy, & Adamson, 2007b). In all of these studies, a history of childhood trauma was associated with the development of psychotic symptoms either during adolescence (Lataster et al., 2006; Spauwen et al., 2006) or adulthood (Bebbington et al., 2004; Janssen et al., 2004; Scott et al., 2007; Shevlin et al., 2007a, 2007b; Whitfield et al., 2005). A large prospective study (Janssen et al., 2004) surveyed 4045 individuals aged 18–64 drawn from the Netherlands Mental Health Survey and Incidence study (NEMESIS). Participants who had experienced emotional, physical, or sexual abuse before the age of 16 were more likely to develop positive psychotic symptoms during a 3-year follow-up period. These associations remained after adjusting for a wide range of potentially confounding variables. Analyses of severity of abuse revealed a dose–response

relationship for the different psychosis outcomes, indicating that the risk of developing a more severe outcome increased with higher frequency of reported childhood abuse (see also Lataster et al., 2006).

The first meta-analysis of this literature included 41 studies and found that people who had suffered childhood adversity were 2.78 times more likely to develop psychosis than those who had not (Varese et al., 2012). Nine of the 10 studies in the meta-analysis which tested for a dose–response relationship found the more severe or frequent the adversity, the greater the risk of psychosis. Demonstrating a dose–response relationship (i.e. showing that the more of X, the greater the probability of Y) is a key criteria for establishing a causal relationship (Hill, 1965). Furthermore the meta-analysis generated odds ratios for each of six types of childhood adversity, which were: sexual abuse (2.38), physical abuse (2.95), emotional abuse (3.40), neglect (2.90), bullying (2.39), and parental death (1.70). They concluded that the 'population attributable risk' was 33%, meaning that 'if the adversities we examined as risk factors were entirely removed from the population (with the assumption that the pattern of the other risk factors remained unchanged), and assuming causality, the number of people with psychosis would be reduced by 33%' (p. 5).

A second meta-analysis showed that people with a diagnosis of schizophrenia were 3.6 times more likely than the general population to have suffered childhood adversities (Matheson, Shepherd, Pinchbeck, Laurens, & Carr, 2013). Schizophrenia was found to be just as strongly associated with childhood adversity as were affective psychosis, depression, and personality disorders, and more strongly related than anxiety disorders. Dissociative disorders and post-traumatic stress disorder (PTSD) were even more strongly related to childhood adversities than schizophrenia. Based on the research evidence, reviewed here, it appears highly likely that childhood adversities and traumas have a causal role in psychosis.

How Childhood Trauma Affects the Clinical Characteristics of Psychosis

In most studies, patients who have a psychotic illness and a history of childhood trauma are shown to have a more severe form of illness across a variety of measures compared to those not exposed to childhood adversity and trauma. They have an earlier age of onset (Garno et al., 2005; Leverich et al., 2002; Schenkel et al., 2005), a higher number of hospitalizations (Schenkel et al., 2005), and a more severe clinical course (Garno et al., 2005; Leverich et al., 2002). Patients with childhood trauma were also more likely to have been re-victimized later in life (Dean et al., 2007). They had more current PTSD (Brown, McBride, Bauer, & Williford, 2005; Gearon, Kaltman, Brown, & Bellack, 2003; Goldberg & Garno, 2005; Neria, Bromet, Sievers, Lavelle, & Fochtmann, 2002), more current or lifetime substance abuse (Brown et al., 2005; Conus, Cotton, Schimmelmann, McGorry, & Lambert, 2010; Leverich et al., 2002; Scheller-Gilkey, Moynes, Cooper, Kant, & Miller, 2004), and suffered more lifetime episodes of major depression (Brown et al., 2005). Those who had been abused in childhood had more positive psychotic symptoms (Ajnakina et al., 2015; Duhig et al., 2015; Van Dam et al., 2015), higher levels of depression and anxiety (Duhig et al., 2015; Lysaker, Beattie, Strasburger, & Davis, 2005; Lysaker & Salyers, 2007; Scheller-Gilkey et al., 2004; Schenkel et al., 2005; Van Dam et al., 2015), and more dissociative symptoms than patients without these experiences (Holowka et al., 2003; Ross & Keyes, 2004; Şar et al.,

2010; Schäfer et al., 2006). In a study of patients with schizophrenia in vocational training, victims of childhood abuse had poorer participation, were less able to sustain intimacy, and were more prone to emotional instability than those who denied childhood abuse (Lysaker et al., 2005; Lysaker, Nees, Lancaster, & Davis, 2004; Lysaker, Wickett, Lancaster, & Davis, 2004). Finally, abused patients have frequently been found to report more suicidal ideation and suicide attempts than those who deny abuse (Brown et al., 2005; Conus et al., 2010; Garno et al., 2005; Romero et al., 2009; Schenkel et al., 2005; Ucok & Bikmaz, 2007).

While similar findings regarding the consequences of early trauma have been reported independent of psychiatric diagnosis (e.g. Cloitre, Tardiff, Marzuk, Leon, & Portera, 1996; Hien et al., 2005; Read, Agar, Barker-Collo, Davies, & Moskowitz, 2001), differences also concern the type and content of psychotic symptoms. Ross, Anderson, and Clark (1994) found in a sample of patients diagnosed with schizophrenia that those who suffered CSA or CPA had significantly more 'positive symptoms' (e.g. hallucinations, ideas of reference, and thought insertion; see also Ucok & Bikmaz, 2007).

While findings regarding the relationship between childhood trauma and delusions, thought disorder, and negative symptoms remain inconsistent (Hammersley et al., 2003; Janssen et al., 2004; Lysaker, Meyer, Evans, & Marks, 2001; Morrison, Frame, & Larkin, 2003; Resnick, Bond, & Mueser, 2003), the association between childhood trauma and hallucinations has repeatedly been replicated. Interestingly, this relationship seems to exist across diagnostic boundaries (Hammersley et al., 2003; Lysaker et al., 2005; Read, Agar, Argyle, & Aderhold, 2003; Read & Argyle, 1999; Scott et al., 2007) and also in the general population (Shevlin et al., 2007a; Whitfield et al., 2005).

The strongest relationship may be between childhood trauma and auditory hallucinations, with voices commenting possibly the most strongly related of all psychotic symptoms to childhood trauma (Dorahy et al., 2009; Ross et al., 1994). In a study of 96 patients with bipolar disorder, those with a history of CSA were twice as likely to have auditory hallucinations in general and six times more likely to hear voices commenting. In this study, no significant association was found between childhood abuse and visual or tactile hallucinations (Hammersley et al., 2003).

The age at which trauma exposure occurs may influence the symptomatology of persons with psychosis. In a study of 75 patients with schizophrenia spectrum disorders, exposure to trauma at three to five years was associated with higher levels of positive psychotic symptoms (hallucinations and delusions), while adolescent exposure to trauma was associated with negative symptoms (Schalinski & Teicher, 2015). However, in a large genetically informed twin study of children less than 12 years (n = 2232), the association between childhood exposure to trauma and psychotic symptoms was evident and independent of when the trauma had occurred during childhood (Arseneault et al., 2011). Further research is required to ascertain if there are developmentally sensitive periods where trauma exposure influences psychotic symptoms in patients with psychosis. Some researchers are now exploring the relationships and pathways between specific types of childhood adversity and specific types of psychotic experiences, with early findings suggesting a degree of specificity between sexual abuse and hallucinations and between bullying or neglect and paranoid delusions (Bentall et al., 2014). Other findings, however, suggest a model of global and cumulative adversity, in which multiple exposures intensify psychosis risk beyond the impact of specific adversities (Longden, Sampson, & Read, 2015).

Childhood Trauma in Patients with Dissociative Disorders

While the importance of childhood trauma in psychotic disorders has only recently been discovered, its relevance for dissociative disorders has been long known. The trauma model of dissociative disorders was developed by Pierre Janet (Janet, 1965, 1977) and Breuer and Freud (1895/1955) in the late nineteenth century. In both its original and more contemporary forms, the trauma model proposes that exposure to trauma plays a significant role in the development of dissociative symptoms (Dalenberg et al., 2012). Early relational trauma, especially abuse and neglect by a trusted or loved other, is argued to play a significant aetiological role in the development of dissociative identity disorder (DID) and related forms of the disorder, e.g. Other Specified Dissociative Disorders, type 1 (OSDD, type 1; Dorahy et al., 2014; Ross & Halpern, 2009; Van der Hart, Nijenhuis, & Steele, 2006).

In terms of the DSM-5 dissociative disorders, the etiological role of trauma and stress is present throughout the clinical and research literature, but is most well researched and documented in the most severe dissociative disorders. In large published DID case series, ranging from 50 to 355 cases per series, 88.5–96.0% of participants reported childhood physical and/or sexual abuse (e.g. Ross, 1997). In a comparison study of the nature and severity of child abuse and neglect in dissociative disorders (DD; n = 39; 36 DID), child maltreatment-related chronic PTSD (n = 13), and mixed psychiatric participants (e.g. anxiety or depressive disorders) with a history of maltreatment in childhood (n = 21), Dorahy and colleagues found the DD group had higher childhood physical, sexual, and emotional abuse, along with physical and emotional neglect, than the mixed psychiatric group. However, it was only childhood sexual abuse that significantly differentiated the DD and chronic PTSD groups, with a greater severity in the DD sample (Dorahy, Middleton, Seager, Williams, & Chambers, 2015). Further, childhood abuse has been corroborated in some studies of persons diagnosed with DID. For example, in work which carefully examined childhood dissociative symptoms and abuse history, Lewis, Yeager, Swica, Pincus, and Lewis (1997) found objective evidence for physical and sexual abuse in 11 of their 12 participants with DID. Some of the childhood abuse experiences were also confirmed by family members. The abuse was so extensive and brutal that Lewis et al. (1997) described it as 'torture' (p. 1707). Experiences of childhood physical and emotional abuse in those with DID and OSDD-type 1 predicts greater exposure to intimate partner violence in adulthood, perpetuating relational trauma (Webermann, Brand, & Chasson, 2014).

The clinical literature on dissociative amnesia likewise consistently identifies trauma as the key aetiological factor (Coons, 2000; Ford, 1989; Loewenstein, 1996; Stengel, 1941; Williams, 1994). Certain factors, particularly the intensity of abuse and the nature of the relationship with the abuser, seem to impact on the development of amnesia (Freyd & Birrell, 2013; Wolf & Nochajski, 2013). For example, in a sample of sexually abused women, those who reported partial or full amnesia for the abuse at some stage in their life reported a greater level of incestuous abuse (53%) than those who reported no amnesia (27%), with emotional closeness to the perpetrator and greater number of abusers being predictive of amnesia (Schultz, Passmore, & Yoder, 2003). Those abused by a trusted other who had negative experiences when they first attempted to disclose the abuse also had a higher rate of amnesia (Wager, 2013). In addition, the war veteran literature has established a link between traumatic experiences and dissociative amnesia (Witztum, Margalit, & Van der Hart, 2002).

Depersonalization/Derealization Disorder (DRD) does not generally appear to be related to the discrete, severe traumatic events that precipitate acute dissociative disorders such as amnesia or chronic disorders like DID and partial forms of DID classified as OSDD-type 1 (Baker et al., 2003; Simeon & Abugel, 2006; see also Chapter 15 of this book). There is no clinical or research literature indicating a similar aetiological pathway to DRD as occurs in the other dissociative disorders, especially with regard to trauma exposure. In a group of 54 patients with DRD, emotional abuse was weakly correlated to depersonalization symptoms ($r = 0.33$), but there was no association between these symptoms and childhood emotional and physical neglect, nor physical and sexual abuse (Simeon, Smith, Knutelska, & Smith, 2008). However, some studies have reported enhanced rates of childhood trauma in patients with DRD but not to the same extent as in other DDs. The first empirical study of trauma and DRD reported histories of childhood trauma in 43%, including CPA (39%) and CSA (33%; Simeon et al., 1997). Using a detailed clinician-administered interview of childhood interpersonal trauma up to age 18, Simeon and co-workers found that subjects with DRD had significantly higher scores in the domains of separation or loss and emotional abuse than healthy controls (Simeon, Guralnik, Schmeidler, Sirof, & Knutelska, 2001). Emotional abuse was predictive of DRD, which is typically precipitated by general psychological stress, childhood anxiety, and conflict (e.g. Baker et al., 2003; Lee, Kwok, Hunter, Richards, & David, 2012).

Conversion disorders are classified as dissociative disorders in the ICD-10, but not in the DSM-5. There is a high correlation between pseudoneurological and dissociative symptoms (Şar, Islam, & Ozturk, 2009; Spitzer, Spelsberg, Grabe, Mundt, & Freyberger, 1999) and numerous studies have indicated an association between childhood trauma and conversion disorders (Roelofs, Keijsers, Hoogduin, Naring, & Moene, 2002; Roelofs, Spinhoven, Sandijck, Moene, & Hoogduin, 2005; Şar et al., 2009). This is particularly true for psychogenic non-epileptic seizures (PNES; Fiszman, Alves-Leon, Nunes, D'Andrea, & Figueira, 2004; Sharpe & Faye, 2006). For example, in one of the first empirical studies of this condition, 77% of 27 patients with PNES reported CSA and 70% CPA (Bowman, 1993). Similar findings have been reported by others, with CSA rates ranging from 60 to 85% and CPA rates between 26 and 70% (Fiszman et al., 2004). A more recent case–control investigation (Proenca, Castro, Jorge, & Marchetti, 2011) comparing 20 patients with PNES and 20 with temporal lobe epilepsy found that scores on the Childhood Trauma Questionnaire (CTQ) were significantly higher for the subscales 'emotional neglect' and 'emotional abuse' in the PNES group. However, Kaplan et al. (2013) found higher scores on all forms of child abuse and neglect assessed by the CTQ in those with PNES compared to those with epilepsy.

The Continuum of Dissociative and Psychotic Disorders

It is probable that there is a spectrum of disorders characterized by psychotic symptoms where trauma is a component cause of variable importance. It may be that, on one end of the spectrum are those who have a clear dissociative disorder, with little or no evidence of negative psychotic symptomatology. At the other end of the spectrum, there are people who have an underlying neurodevelopmental disposition towards psychosis, in some cases arising from the experience of childhood adversity, neglect, or trauma. Their difficulties are frequently characterized by the widespread neurocognitive deficits

classically described in people diagnosed with schizophrenia. It is likely that these syndromes lie on a continuum where temperament, early attachment relationships, and exposure to trauma and substances throughout childhood and adolescence all contribute to the final phenotype, longitudinal course of illness, and response to interventions.

The consistent evidence presented in this chapter shows that childhood trauma is highly prevalent in both schizophrenia and in dissociative disorders. However, studies directly comparing rates of childhood trauma in the two disorders are lacking. A meta-analysis of four studies comparing abuse in childhood in those with schizophrenia (n = 59) and persons with DID/PTSD (n = 76), reported patients diagnosed with schizophrenia were significantly less likely to have experienced sexual abuse (Matheson et al., 2013). However, there are significant limitations with this evidence. The studies are now all dated, having been conducted between 1989 and 1998. In all studies, the sample sizes were very small, with probable selection bias; they only examined for sexual abuse, omitting other forms of childhood adversity. At least two of the studies did not use standardized methods of inquiry regarding sexual abuse but rather relied on medical file reviews (Matheson et al., 2013). Finally, these studies do not report the severity, duration, proximity to the abuser, and developmental stage at which the trauma exposure occurred. As such, meaningful direct comparisons of the trauma experiences of those with psychosis and those with dissociative disorders cannot be made. It would be premature to conclude from studies such as this meta-analysis that childhood trauma is less frequent or less severe in those with schizophrenia compared to those with dissociative disorders, though anecdotal indicators from clinical practice and intimations from the empirical literature suggest this may be the case. Further research is needed to investigate issues of types of childhood trauma, the timing of when it occurred, and the phenomenological, neuroimaging, and neurocognitive similarities and differences that would inform the similarities and differences between psychosis and dissociative disorders. However, when such studies are conducted, it might well be found, based on clinical experience and the limited existing empirical data, that the severity and duration of childhood trauma, particularly sexual abuse, experienced by those diagnosed with dissociative disorders will be significantly greater than those diagnosed with schizophrenia.

There are several clinical and research implications arising from the compelling evidence that childhood trauma is a risk factor for psychosis. Most importantly, a subgroup of individuals who meet DSM-5 criteria for schizophrenia or schizoaffective disorder may respond to psychotherapy for psychological trauma. This subgroup may include many individuals who fail to respond to antipsychotic medication and standard care. In terms of aetiology, family, adoption and cross-fostering studies of psychosis, research should control for psychological trauma. In terms of pathophysiology, biological changes (such as hippocampal atrophy or disturbances in glutamate transmission) may be driven by trauma more than by endogenous biological factors in psychosis in general, or in a subset of affected individuals (see Chapter 10 of this book). For these reasons, the relationship between trauma, dissociation, and psychosis should be an important ongoing theme in research and clinical work.

The confluence of data from dissociative and psychotic disorder samples (Laferriere-Simard, Lecomte, & Ahoundova, 2014; Ross & Keyes, 2009) demonstrates the importance for users of mental health services, whatever their diagnosis, to be routinely asked about childhood adversities, so that meaningful formulations of their difficulties can be made and appropriate treatment plans developed. In particular, a greater emphasis

needs to be made by clinicians to empathically enquire about all forms of abuse and neglect in childhood and not focus solely on childhood sexual abuse. Research suggests that this obvious first step towards providing meaningful help is still not occurring in many settings and that training is required to address this gap in service delivery (Read, Hammersley, & Rudegeair, 2007). Practice needs to catch up with the overwhelming evidence that many of those with psychotic and dissociative disorders have experienced childhood trauma and are in need of trauma-informed care in addition to other interventions routinely provided in the treatment of severe psychopathology.

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10

Structural Brain Changes in Psychotic Disorders, Dissociative Disorders, and After Childhood Adversity

Similarities and Differences

Roar Fosse, Andrew Moskowitz, Ciaran Shannon, and Ciaran Mulholland

Introduction

Over the past several decades, extensive research has been conducted on brain alterations associated with schizophrenia and psychotic disorders, with the assumption that these changes represent neurodevelopmental abnormalities with a biogenetic origin. However, more recent animal and human research has demonstrated that early life adversity can impact the developing brain in ways similar to those associated with psychotic disorders. Early life stress alters brain development by modifying epigenetic processes such as methylation and acetylation, thereby changing gene expression and thus the structure and functioning of neurons and neural networks, with effects lasting into adult life (Kundakovic & Champagne, 2015). As a consequence, the functioning of brain systems, such as the hypothalamic–pituitary–adrenal (HPA) stress axis, and structures, such as the hippocampus, amygdala, and prefrontal cortex, are profoundly affected.

In this chapter, we aim to highlight: (i) similarities and differences between brain changes after adversity, on the one hand, and those found in psychotic and dissociative disorders, on the other, and (ii) differences between psychotic and dissociative disorders in these areas. As in all chapters of this book, the hope is that a description of the ways in which psychotic and dissociative disorders converge and diverge may help us to better understand aetiology and develop more effective treatment approaches.

Among the dissociative disorders, we focus on dissociative identity disorder (DID) and dissociative disorder not otherwise specified (DDNOS; Other Specified Dissociative Disorder [OSDD] in DSM-5), but not on other dissociative disorders or on post-traumatic stress disorder (PTSD). For psychosis, we focus on schizophrenia, emphasizing both first episode psychosis and more established psychotic disorders. In general, brain processes that are involved in the regulation of stress and/or that have been found to be altered following severe stress early in life provide a natural starting point. However, as research in these areas is scarce for dissociative disorders, the scope of this chapter will be limited to the hippocampus, amygdala, prefrontal cortex, and insula, along with the relationships between them.

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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Methods

We searched PubMed for original studies, reviews, and meta-analyses of alterations in the above mentioned brain processes in schizophrenia, DID, and DDNOS, and following early life stress. Various search strings were used, with combinations of the noted brain processes, disorder types, and common stress exposure types in childhood.

For the dissociative disorders, only a small set of studies exists and there are no meta-analyses. We included all studies we could identify, except for two, for diagnostic reasons. In the first study, Weniger, Lange, Sachsse, and Irle (2008) assessed 13 dissociative patients, but 70% of them were diagnosed solely with dissociative amnesia, which is not a diagnosis of interest here. Likewise, only 20% of Irle, Lange, Sachsse, and Weniger's (2009) small PTSD sample also received a diagnosis of DID. As PTSD is not being considered here, this study was also excluded.

Hippocampus

The hippocampus is central to a variety of functions, including memory, spatial navigation, cognitive maps, negative feedback control of the HPA stress axis, and integrated conscious experience or 'construction' of the external world (Andersen, Morris, Amaral, Bliss, & O'Keefe, 2006).

Early Life Stress

Hippocampal volume reduction is consistently found in adults who report having experienced childhood maltreatment (see Read, Fosse, Moskowitz, & Perry, 2014 for a review). In human as well as in animals, volume reductions are found in all hippocampal subfields after maltreatment (McEwen, Nasca, & Gray, 2016; Teicher, Anderson, & Polcari, 2012; Zach, Mrzilkova, Rezacova, Stuchlik, & Vales, 2010).

Animal studies suggest that, on a cellular level, pronounced stress-induced changes in the hippocampus include atrophy of excitatory apical dendrites on pyramidal cells, reduced number and activity in parvalbumin-containing interneurons, and reduced levels of glucocorticoid receptor (GR) mRNA expression in all hippocampal subfields (Dannlowski et al., 2012; Dent, Choi, Herman, & Levine, 2007; Fuchs & Flugge, 1995; Hu, Zhang, Czeh, Flugge, & Zhang, 2010). The likely consequence of these changes is altered neural information flow and loss of hippocampal-dependent functions.

Psychotic Disorders

In individuals diagnosed with schizophrenia, hippocampal structural changes are one of the most frequently observed brain abnormalities, first identified more than 35 years ago (Bogerts, Meertz, & Schonfeldt-Bausch, 1985; Scheibel & Kovelman, 1981). The central finding is of 5–10% smaller hippocampal volume bilaterally, that may progress from psychosis onset. The smallest volumes have been reported in chronic states and in elderly patients (Adriano, Caltagirone, & Spalletta, 2012; Prestia et al., 2015; Read et al., 2014). Within groups of psychotic patients, decreased hippocampal volume correlates with childhood adversity (Hoy et al., 2012). All hippocampal subfields appear to be

affected (Haukvik et al., 2015); some studies have found changes in the anterior parts, CA1 and the densely interconnected subiculum (Mamah et al., 2012; Prestia et al., 2015), while others have found stronger results in the more posterior parts, CA2–3 and CA4-dendate gyrus (Kawano et al., 2015). The reduced hippocampal volume has been reported to correlate with both positive and negative psychotic symptoms (Mathew et al., 2014; Zierhut et al., 2013), as well as with increased emotional sensitivity to stress (Collip et al., 2013).

On a cellular basis, changes in schizophrenia include decreased mRNA expression of GR receptors throughout all hippocampal subfields (Perlman, Webster, Kleinman, & Weickert, 2004; Webster, Knable, O'Grady, Orthmann, & Weickert, 2002), decreased number of apical dendrite spines/spine density in subicular internal pyramidal neurons (Rosoklija et al., 2000), reduced size of pyramidal neuron cell bodies (Harrison, 2004), and reduced parvalbumin-containing interneuron activity as well as reduced interneuron density and number (Read et al., 2014; Wang et al., 2011).

Dissociative Disorders

In patients with DID, three studies have reported smaller hippocampal volumes compared to healthy controls. Vermetten, Schmahl, Lindner, Loewenstein, and Bremner (2006) identified significantly smaller left and right hippocampal volumes in 15 medicated DID patients compared to 23 currently healthy control subjects (though the majority of these had previously been given a psychiatric diagnosis). Mean, overall hippocampal volume was 19.2% smaller in the DID group, with nominally (but not significantly) greater reductions on the left side (22.3% smaller) than on the right side (16.0% smaller). Likewise, Ehling, Nijenhuis, and Krikke (2008) reported significantly smaller hippocampal volumes both on the left side (26% smaller) and on the right side (25% smaller) in 10 patients with DID compared to 20 healthy controls (similar findings were reported for DDNOS, but smaller, 13–14%, reductions). Corroborating these findings, Chalavi and co-workers (Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Barker, et al., 2015; Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Cole, et al., 2015) found reduced hippocampal volume bilaterally in 17 patients with DID compared to 32 healthy controls, with no significant differences between left (10.2% reduction) and right (11.4% reduction) hippocampi. The smaller volumes in DID as compared to healthy controls included bilateral CA2–3, CA4-dentate gyrus and subiculum, right only CA1, and left only presubiculum (Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Cole, et al., 2015). The only differences between PTSD-only and DID patients were that the latter had smaller volumes in the left CA4-dentate gyrus and subiculum.

Scores on dissociation measures are also correlated with hippocampal size. Ehling et al. (2008) reported a significant correlation between dissociation scores and smaller hippocampal volumes across all subjects – those with DID, those with DDNOS, and healthy controls. Likewise, Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Barker, et al. (2015) and Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Cole, et al. (2015), who did not find larger volume reductions in the left than in the right hippocampi in DID, also found psychoform (Dissociative Experiences Scale, DES) and somatoform (Somatoform Dissociation Questionnaire 20) dissociation scores in the DID patients correlated with volume reductions, particularly on the left side in the subiculum and presubiculum. In addition to dissociation scores, severity of childhood relational adversities as measured

with the Traumatic Experiences Checklist also correlated with volume reductions in these two left hemisphere hippocampal subfields. Similarly, in an MRI study of 21 women exposed to childhood sexual abuse and 21 women without abuse histories, Stein, Koverola, Hanna, Torchia, and McClarty (1997) found DES scores correlated substantially with smaller hippocampal volume on the left side ($r = -0.73$), but not on the right side. Finally, in a combined sample of women, only some of whom had experienced childhood sexual abuse and some of whom were diagnosed with PTSD, Bremner et al. (2003) also identified an association between dissociation severity level and smaller left (but not right) hippocampal volume.

Summary

Smaller hippocampal volume has consistently been found after childhood adversity (and after early stress in animal research), and is associated with both psychotic and dissociative disorders. There is some suggestion, however, that the impact of early stress on the hippocampus is not evident in childhood, but only later in life (Teicher et al., 2012). There is some indication of greater volume reductions in dissociative disorders than in psychotic disorders, though not in the Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Barker, et al. (2015) and Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Cole, et al. (2015) study (this may be due to methodological differences – including the method of measuring brain region volume – between it and the previous studies). No consistent findings of hemispheric differences in volume reductions have been found in either psychosis or dissociative disorders. In contrast, studies using measures of dissociation have consistently found stronger correlations between dissociation scores (and assessments of childhood adversity) and left hippocampal reduction, in comparison to the right hippocampus. Within psychotic disorders, hippocampal volume reduction predicts both positive and negative symptoms, as well as increased sensitivity to stress; furthermore, cellular changes seen in the hippocampus are highly consistent with those found after early adversity (in animal research).

Amygdala

The amygdala, or amygdaloid complex, is composed of many different nuclei and is involved in a variety of functions – including fear conditioning, memory, perception, and attention (Aggleton, 2000).

Early Life Stress

Some studies have reported increased amygdala volume after chronic stress in early life, in cases of maltreated youth (Whittle et al., 2013), severely deprived children reared in institutions (Malter Cohen et al., 2013; Tottenham et al., 2010), and children of chronically depressed mothers (Lupien et al., 2011). However, an earlier meta-analysis found no volume change in maltreated children (Woon & Hedges, 2008), and two recent studies of neglected children found no volume differences (McLaughlin et al., 2014; Sheridan, Fox, Zeanah, McLaughlin, & Nelson 3rd, 2012). These contradictory results have been further complicated by a recent study which found significantly *smaller* amygdalae in

children exposed to physical abuse or neglect in comparison to children who had not experienced such early adversities (Hanson et al., 2015). Studies of adolescents who experienced child maltreatment when younger have also found smaller amygdalae (Edmiston et al., 2011; Korgaonkar et al., 2013), as well as no differences (Carrion et al., 2001; De Bellis et al., 2002). One study of adults diagnosed with borderline personality disorder who had experienced childhood sexual or physical abuse found decreased amygdala volume bilaterally (Schmahl, Vermetten, Elzinga, & Douglas Bremner, 2003). A possible explanation for these disparate findings is that amygdala volume change is sensitive to the timing of stress – the earlier the stress exposure the more vulnerable the amygdala. In addition, amygdala changes following stress may be non-linear, with early life stress tending first to increase amygdala volume but later to decrease it. It has been suggested that an initial growth spurt may be caused by stress-induced hyperactivity, with a subsequent shrinkage resulting from cell loss due to sustained hyperactivity, perhaps involving increased excitability (Hanson et al., 2015).

Psychotic Disorders

There have been a number of studies that have looked at amygdala volume in first episode psychosis (FEP) and schizophrenia, with fairly consistent results. In a 2010 review, Levitt, Bobrow, Lucia, and Srinivasan (2010) reported lower amygdala volume in both FEP and (chronic) schizophrenia, compared to healthy controls. In a subsequent meta-analysis, which included prior meta-analytic studies, Shepherd, Laurens, Matheson, Carr, and Green (2012) also reported reduced amygdala volume in schizophrenia, noting that there was some evidence of a progression over time. One year later, an additional meta-analysis of 34 prior studies, totalling 1019 patients with schizophrenia and 1186 healthy controls, likewise found reduced amygdala volume in the patient group (Haijma et al., 2013), which was replicated in a further large, multi-site study (Van Erp et al., 2014). However, the authors reported relatively small effect sizes, arguing that larger samples were necessary for significant differences to appear. This may help to explain the lack of amygdala volume differences between patients with schizophrenia and healthy controls reported in subsequent, smaller studies (Mahon et al., 2015; Rahm et al., 2015).

Earlier studies had suggested that amygdala volume reductions were not apparent in first episode psychosis. However, recent studies have reported reduced amygdala volume, also in first episode (adult) patients, and noted that smaller amygdala volume correlated with childhood trauma (Aas et al., 2012; Bois et al., 2015; Hoy et al., 2012; Watson et al., 2012). In contrast, Levitt et al. (2001) reported increased amygdala size in adolescents (mean age 14 years) with schizophrenia.

Dissociative Disorders

The same pattern of amygdala volume changes as seen in schizophrenia and to a lesser extent following early life adversity has been reported for adults with dissociative disorders; that is, either no change or reduced volume. Vermetten et al. (2006) reported a mean 31.6% smaller amygdalae volume in patients with DID compared to healthy controls. Likewise, Ehling et al. (2008) reported that patients with DID and patients with DDNOS both had significantly smaller amygdala volume (10–12%) compared to healthy

controls. In the most recent study, however, Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Barker, et al. (2015) and Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Cole, et al. (2015) detected no volumetric differences in the amygdala in DID as compared to healthy control subjects.

Summary

Research on amygdalae volume after early childhood adversity, and in association with psychotic and dissociative disorders, has led to a range of findings, which at first glance appears confusing. Most consistent have been those studies of psychotic disorders, which have regularly found smaller amygdalae volume bilaterally in both first episode and chronic psychotic patients, though the extent of the decrease has been small. The few negative findings were probably due to small *N* values; one study, of adolescent schizophrenia patients, found significantly *larger* amygdala volume. Among the three studies of amygdala volume in major dissociative disorders included here, two found large or very large differences and one found no significant differences between the groups. Finally, with regard to early childhood adversity, there is a highly disparate group of findings, with several studies finding *increased* amygdala volume, some showing no differences, and others showing reduced volume. One possible explanation for this range of findings may relate to the age at which the adversity was experienced, and the age at which brain scans were performed. Also, amygdala volume may first become reduced several years after childhood adversity, possibly after initially having been increased more proximate to the exposure (Weems, Scott, Russell, Reiss, & Carrion, 2013).

Frontal Lobes

The frontal lobes are central to higher order executive functions such as working memory, goal-directed thinking, problem solving, cognitive flexibility, mental representations, and the control of feelings and behaviour (Miller & Cummings, 2006). Grossly speaking, dorsolateral prefrontal regions and frontal parts of the anterior cingulate are central to cognitively oriented control functions, whereas orbitofrontal and ventromedial regions are central to the control and regulation of emotion.

Early Life Stress

In adults exposed to childhood adversity, grey matter volume losses have been observed in several regions of the frontal lobes, most prominently in the medial prefrontal and orbitofrontal regions, the anterior cingulate, and the dorsolateral prefrontal cortex (Cohen et al., 2006; Hart & Rubia, 2012). Animal studies have detailed neural aspects that contribute to the volume loss after early life stress, including retraction and debranching of apical dendrites (MacLullich et al., 2006; Van Harmelen et al., 2010), decreased GR mRNA expression, and increased oxidative stress in cortical parvalbumin-containing interneurons combined with reduced GAD67 expression (GAD67 is critical for GABA synthesis in the brain; see Lau & Murthy, 2012). These changes are likely to compromise frontal–cortical regulation of subcortical structures, including the amygdala, hippocampus, and HPA axis (Holmes & Wellman, 2009).

Psychotic Disorders

Abnormal frontal lobe functioning and structures have been consistently found in psychotic disorders. Widespread areas of the frontal/prefrontal regions exhibit reduced volume in patients with psychosis, including middle and inferior frontal regions, anterior cingulate, and orbitofrontal and dorsolateral prefrontal cortices (Read et al., 2014). Meta-analytic studies suggest that the volume loss is particularly prominent in inferior and medial frontal gyrus and anterior cingulate (Haijma et al., 2013; Shepherd et al., 2012). In addition, Sheffield, Williams, Woodward, and Heckers (2013) reported a significant association between sexual abuse and prefrontal cortical volume loss in patients with schizophrenia.

On a cellular level, the frontal lobes of psychotic patients show a decrease in GR mRNA expression, reduced dendritic spine density in deep layer three pyramidal cells, and altered density, size, and shape of pyramidal cells and interneurons in the anterior cingulate (Read et al., 2014). The subpopulation of GABA interneurons that express parvalbumin are also altered in individuals with schizophrenia, with reduced density in the anterior cingulate and reduced activity in the dorsolateral prefrontal cortex (Curley et al., 2013; Lewis, Hashimoto, & Volk, 2005). The expression of GAD67 also is reduced in frontal cortical regions (Lewis, Curley, Glausier, & Volk, 2012; Lewis et al., 2005). These interneuron changes may be central to aberrant cortical gamma oscillations and compromised cognitive functions in this disorder (Lewis et al., 2012).

Dissociative Disorders

There appears to have been only two studies of the frontal lobes in DID and/or DDNOS. First, Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Barker, et al. (2015) and Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Cole, et al. (2015) reported reduced volume bilaterally of the frontal lobes overall in DID (and PTSD only), compared to healthy control subjects. Exploratory analyses indicated that the smaller volume in DID was localized in left lateral and right medial orbitofrontal cortex, left and right pars orbitalis, left superior frontal cortex, and right caudal anterior cingulate cortex. Compared to PTSD patients, however, only the left precentral cortical region exhibited less volume in DID patients. Interestingly, from the same study, Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Barker, et al. (2015) and Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Cole, et al. (2015) found higher levels of dissociative symptoms correlated with *more* volume in the right superior frontal cortex, albeit at a level just below significance. In the second study, Reinders et al. (2018) compared 32 female patients with DID with 43 healthy controls. The authors reported reduced volume in dorsolateral and orbitofrontal prefrontal cortex, right medial superior frontal cortex, and right anterior cingulate cortex in DID. They also indicated that smaller frontal lobes bilaterally were associated with higher levels of dissociative symptoms, most notably in the orbitofrontal cortex.

Summary

The frontal lobes are highly sensitive to stress (Arnsten, Raskind, Taylor, & Connor, 2015), which typically leads to volume loss and a spectrum of changes in pyramidal cells and interneurons that compromise functionality. Consistent with this, frontal lobe

volume loss is extensive in psychotic disorders, and detailed neural changes appear to match those seen after early life stress. The two studies that have been published on the frontal lobes in DID also indicate volume loss, but possibly less extensive than in psychosis. There is even the suggestion that some superior frontal regions may demonstrate increased volume in DID.

Insula

The insula is involved in functions such as interoception – awareness of the body and of feelings, saliency detection, integration of external stimuli, self-consciousness of behaviour, individual personality, the experience of identity/neuronal representations of the self, and mediating homeostatic responses to stress (Craig, 2009; Wylie & Tregellas, 2010). Its functional role involves a close interaction with the anterior cingulate, which among other functions is central to the representation of agency.

Early Life Stress

Several studies have found that accumulated severely stressful life events (beginning in childhood), as well as recent ones, are associated with bilateral insula volume reductions (Ansell, Rando, Tuit, Guarnaccia, & Sinha, 2012; Herringa, Phillips, Almeida, Insana, & Germain, 2012). Moreover, together with the anterior cingulate, the insula is among the most consistently implicated brain regions in PTSD, with up to 10% volume reductions reported (Etkin & Wager, 2007; Herringa et al., 2012).

Psychotic Disorders

Reduced insula volume has been reported in several studies of patients considered to be at ultra-high risk for psychosis, and who later developed such disorders (Jung, Borgwardt, Fusar-Poli, & Kwon, 2012; Takahashi et al., 2009). In patients who developed schizophrenia, a highly consistent finding across 19 published studies and meta-analytic investigations is reduced insular volume, including both right and left sides and anterior and posterior parts, with a mean reduction of 5.2% (Haijma et al., 2013; Shepherd et al., 2012; Wylie & Tregellas, 2010). There is some indication of larger reductions in anterior than in posterior parts (Shepherd et al., 2012). Moreover, reduced insula volume has been associated with positive symptoms, such as hallucinations, as well as with negative symptoms, in schizophrenia patients (Wylie & Tregellas, 2010).

Dissociative Disorders

In patients with DID as compared to healthy controls, Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Barker, et al. (2015) and Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Cole, et al. (2015) reported a lower volume of the insular cortices overall, particularly on the left side, with a mean reduction bilaterally of 6.3%. Reinders et al. (2018) reported reduced insular volumes bilaterally in their group of female DID patients compared to healthy controls. They also indicated that smaller insula was associated with higher dissociation scores in an extended cortical region that included the insula.

Summary

Reduced insula volume appears to be a common finding after early adversity and in both psychotic and dissociative disorders.

Functional Relationships between Brain Regions

While we have, to this point, discussed the hippocampus, amygdala, frontal lobe, and insula independently; these structures do not, of course, work independently. In order to more accurately understand the reasons for volume losses and other changes in these four brain structures, we have to look not only at their interrelationships, but also at the relationship with a number of other functional systems operating in the brain.

As noted above, all four brain structures are involved in a variety of functions. They have extensive networks of connections with each other, and with other regions, in line with their many integrative functions. Likewise, all four structures are modulated by common hormonal and neurochemical systems. Of particular relevance for our purposes here are the activating effects of stress hormones elicited by the HPA axis and neuromodulation by catecholamines, including the mesocorticolimbic dopamine system and the noradrenaline system, both of which are co-activated with the HPA axis during stress.

Early Life Stress

The detailed morphological changes following enduring stress likely contribute to altered regional activation levels, inter-regional functional interactions, and patterns of neural firing. For example, early life adversity is associated with hyperactivity in brain regions that detect and enhance biologically relevant information (the salience network), such as the amygdala, anterior insula, ventrolateral prefrontal cortex, and dorsal anterior cingulate cortex (Marusak, Etkin, & Thomason, 2015). Moreover, among the most typical changes following enduring stress is a shift in the functional balance between the amygdala and prefrontal cortex in the control of emotional processing, where the amygdala is strengthened and the prefrontal cortex weakened (Arnsten et al., 2015). The sequelae of stress also appear to include altered functional connectivity between several other brain regions, including the hippocampus and prefrontal cortex, the hippocampus and amygdala, and between the insula and both the amygdala and frontal lobes (Dunkley et al., 2014; Marusak et al., 2015; Negron-Oyarzo, Neira, Espinosa, Fuentealba, & Aboitiz, 2015; Thomason et al., 2015; Vaisvaser et al., 2013).

Structural changes in the hippocampus, amygdala, and frontal lobes after early life stress are associated with elevated release of stress hormones by the HPA axis. Animal research has shown that occupancy of receptors for stress hormones, such as receptors for glucocorticoids and corticotrophin-releasing factor, leads to cellular remodelling (e.g. dendrite shrinkage) in all three brain regions by mechanisms that include modification of epigenetic processes and gene transcription rates (Arnett et al., 2015; McEwen, 2000; McEwen et al., 2016). Although less studied, similar mechanisms may contribute to structural changes in the insula following stress, since the insula also appears to

contain substantial numbers of receptors for both glucocorticoids and corticotrophin-releasing factor (Fornari et al., 2012; Millan, Jacobowitz, Hauger, Catt, & Aguilera, 1986).

Structural and functional changes in catecholamine systems following enduring stress likely contribute to altered functioning in the brain regions focused on here. For example, enduring stress is accompanied by increased dopamine activity in the striatum and reduced dopamine activity in the prefrontal cortex (Pruessner et al., 2010). One known consequence of these changes is disruption of cognitive functions that depend on the frontal lobes, such as working memory (Gamo et al., 2015). Also likely to be affected are functions of the insula, due to the high level of dopamine receptors in this region (Jones, Kilpatrick, & Phillipson, 1986; Woodward et al., 2009). Moreover, stress-based changes in the dopamine system are likely to interact with changes in the hippocampus that occur in parallel, since the hippocampus is centrally involved in regulating the dopamine system; the hippocampus and dopamine system may work together to affect a range of brain functions such as saliency detection (Lodge & Grace, 2006).

Psychosis and Dissociative Disorders

Consistent with findings seen after early life stress, altered functional connectivity between the amygdala and prefrontal cortex has been found in both psychosis (Vai et al., 2015) and in patients with DID (compared to PTSD; Nicholson et al., 2015). Likewise, altered functional connectivity between several other brain regions, including the hippocampus, amygdala, insula, and prefrontal cortex, have also been found in psychotic disorders (Mamah, Barch, & Repovs, 2013; Samudra et al., 2015).

Findings in psychotic disorders include elevated baseline levels of cortisol, cortisol sensitization to novel stressors, and cortisol habituation to known stressors, in addition to dopamine hyperactivity in the striatum and hypoactivity in the prefrontal cortex (Read et al., 2014; Shah & Malla, 2015). All of these changes are also seen after early life stress. This suggests that the mechanisms behind the matrix of brain structural alterations seen in psychosis may be the same as those involved in the brain changes after early life stress. This raises the empirical question of whether adversity underpins the neurological anomalies in psychotic disorders. While dissociative disorders generally are believed to be stress related, changes in the HPA stress axis and dopamine system have not yet been explored in detail.

Discussion

There are substantial similarities between brain abnormalities seen after early adversity and those found in psychotic disorders. As childhood trauma is common in psychotic disorders (see Chapter 9 of this book), it can be argued that experiences of early adversity in persons later diagnosed with psychotic disorders may be a cause – or even the primary cause – for most of the brain abnormalities observed in these disorders. Such a hypothesis is consistent with a wide range of animal studies (Arnsten et al., 2015; Bremner & Narayan, 1998; Holmes & Wellman, 2009; Mizoguchi et al., 2000; Roth & Sweatt, 2011), but requires more support from longitudinal human studies.

As childhood trauma is also common in dissociative disorders (see Chapter 9 of this book), it is reasonable to assume that similar brain abnormalities may be found there.

And indeed, the literature reviewed points towards common volume reductions in the hippocampus, amygdala, and prefrontal cortex in schizophrenia, in DID/DDNOS, and in adults exposed to early life stress (though Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Barker, et al. (2015) and Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Cole, et al. (2015), did not find smaller amygdalae in DID), suggesting that these are common sequelae following severe early life stress. In addition, in schizophrenia, and in adults who experienced severe early life stress, comparable changes are seen in the morphology of pyramidal and interneurons, though no studies have focused on this level of analysis in DID/DDNOS.

And yet, psychotic and dissociative disorders present fundamentally differently, despite sharing some symptoms (auditory hallucinations and most first-rank symptoms; see Chapter 13 of this book). Despite the similarities noted above, could there be somewhat different underlying brain abnormalities reflecting distinct developmental pathways? While the available research provides an insufficient basis on which to propose brain alterations uniquely associated with psychotic or dissociative disorders, there are some intriguing hints in the existing studies. There may be a more pronounced and generalized volume loss in the prefrontal cortex in psychotic compared to dissociative disorders (Chalavi, Vissia, Giesen, Nijenhuis, Draijer, Barker, et al., 2015; Read et al., 2014). In schizophrenia patients this difference might contribute to a more general, extensive cognitive deficit (e.g. based on overall PFC alterations), along with reduced PFC-control over subcortical limbic systems. In dissociative disorders, a possibly more intact PFC function may allow for a larger degree of cognitive control and inhibition of subcortical affective processes (Lanius et al., 2010; Simeon, Knutelska, Nelson, & Guralnik, 2003). Clearly, studies directly comparing persons with dissociative and psychotic disorders from this perspective are needed, to illuminate any possible differences in these areas.

Different Neurodevelopmental Pathways in Psychotic and Dissociative Disorders? A Proposal

Though it is premature to conclude that there are differences in the PFC and PFC-mediated pathways between psychotic and dissociative disorders, should such a position be supported by future research, it would be consistent with the suggestion that the capacity to dissociate may serve to protect executive functioning, and potentially some parts of the PFC. This might work in the following way.

To dissociate in the face of acute or chronic danger or threat has been hypothesized to be an adaptive function that reduces subjective distress (Spiegel et al., 2011). In this sense, the capacity to dissociate may represent a resilience factor that maintains attachment and preserves social, cognitive, intellectual, and self-reflective abilities (Brand, Armstrong, Loewenstein, & McNary, 2009; Freyd, DePrince, & Zurbriggen, 2001; chapter 22 of this book). One may speculate that, in children relatively low on dissociative tendencies, a limbic, amygdala-centred (or *hot*) route of information processing may be dominant in stressful situations. In the absence of dissociation, chronic, or repetitive, stress may produce pressure on the prefrontal (or *cool*) network of information processing, leading to structural and functional compromise, as suggested by Arnsten and colleagues (Arnsten et al., 2015, see also Arnsten, 2009). This might provide a foundation for psychotic psychopathology. In contrast, in children with high dissociative capacity, dissociation may

serve to dampen the limbic-amygdala route of information processing. This would thus limit the detrimental impact of this route on the 'cool' PFC networks, leading to reduced pressure on prefrontally dependent functions, and, in turn, fewer deficits in cognitive processes. An alternate (or complementary) hypothesis is that children who go on to develop dissociative disorders have been exposed to more severe and extensive childhood abuse (particularly sexual abuse) than children who ultimately present with a psychotic disorder. There is clearly evidence that the extent and severity of abuse in persons with DID is greater than that reported by persons with psychotic disorders (see Chapter 9).

Conclusion

There is compelling evidence that the structural brain abnormalities long demonstrated in schizophrenia and psychotic disorders are highly similar to those seen after early adversity, in both animal and human studies. It also appears likely that structural brain abnormalities in dissociative disorders have a similar aetiology. While further research is sorely needed to address possible differences in brain structure (and functioning) between these two sets of disorders, it appears plausible that the heightened capacity to dissociate in dissociative disorders may not only allow the maintenance of certain social and cognitive capacities, but also could protect against the deterioration of certain brain regions, particularly the prefrontal cortex, that is so affected in psychotic disorders.

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11

Dissociative Symptoms in Schizophrenia Spectrum Disorders

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Introduction

Approaching the issue of dissociative symptoms in schizophrenia is a challenge. First of all, neither 'dissociation' nor 'schizophrenia' can be viewed as a well-defined construct or condition with clear-cut boundaries. The modern definition of dissociation 'lacks a single, coherent referent … that all investigators in the field embrace' (Cardena, 1994, p. 15). Similarly, but perhaps even more so, many authors question the current conception of schizophrenia (Moskowitz, 2012; Read, 2004; Ross, 2004, 2014), or whether it represents a homogeneous entity (Levinson & Mowry, 1991; Siever, Kalus, & Keefe, 1993; Stip, 2009). Bleuler, who introduced the term 'schizophrenia', was already aware of the diversity of the related syndromes, and emphasized this by renaming 'dementia praecox' the 'group of schizophrenias' (Bleuler, 1911; Moskowitz & Heim, 2011). Finally, there is some controversy about how dissociative terms are used in the fields of dissociation and schizophrenia. For example, 'depersonalization' is sometimes used to describe an experience of unreality in schizophrenia, whereas most researchers consider it instead to be a syndrome including emotional numbing, visual derealization, and altered body experience (Sierra & Berrios, 2001; Chapter 15 in this book).

Another problem arises from the interpretation of phenomena, associated with dissociation or the dissociative disorders, in patients with a diagnosis of schizophrenia. Again, depersonalization can serve as an example of this problem. In the German tradition of descriptive psychopathology, pre-eminently represented by Karl Jaspers and Kurt Schneider, this phenomenon is subsumed under 'disorders of self', more specifically the awareness of 'self-activity' ('Aktivität des Ich'; Jaspers, 1959). Despite some discussion over the years as to whether depersonalization could really be distinguished from 'disorders of self' (e.g. Davison, 1964; Meyer, 1956), this concept dominated the interpretation of depersonalization and similar phenomena in patients with schizophrenia over the following decades. While it has been recognized that depersonalization occurs in patients with a variety of mental disorders, most authors consider it to be

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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manifested differently in patients with schizophrenia (Bird, 1958; Davison, 1964; Meyer, 1956; Saperstein, 1949). Meyer (1956) noted that schizophrenic patients would often interpret depersonalization experiences as threatening or uncanny, and that these experiences would be characterized by feelings of passivity or being influenced by something outside one's own person (a position also held by other authors, such as Langenfeldt, 1960). Another characteristic, frequently put forward to argue that depersonalization in psychotic disorders differs from similar phenomena found in other diagnostic groups, is the associated lack of insight (Bird, 1958; Saperstein, 1949). Davison (1964), for instance, argues that 'if the non-delusional criterion for the diagnosis of depersonalization … is rigorously applied its occurrence in schizophrenia will prove to be comparatively infrequent' (p. 510). This position is still held in some more recent textbooks: 'People with depersonalization … may preface their description with "*as if*" and it is this element of uncertainty that occurs in the depersonalization of both healthy and neurotic people, and differentiates them from the delusions about the self occurring in psychoses' (Sims, 1995; p. 206). However, as others have argued with regard to auditory hallucinations (Moskowitz & Corstens, 2008), 'insight', or the lack of delusional elaboration, is not in fact an experienced characteristic of the depersonalized state, but rather a response to it.

Apart from the quality of depersonalization in schizophrenia, its significance for the process of the illness has been discussed throughout the past century. Many authors stressed its special relevance for the schizophrenic prodrome and the early phases of the illness (e.g. Ackner, 1954; Møller & Husby, 2000; Yung & McGorry, 1996). In the basic symptom model (Huber & Gross, 1989; Klosterkötter, 1992), depersonalization and derealization are considered intermediate phenomena on a continuum from uncharacteristic 'basic symptoms' to 'psychotic externalization' and ultimately the development of first-rank symptoms. Other authors highlight that, at least in a subgroup of patients, depersonalization is not only present in the early phases but throughout the course of psychosis (Maggini, Raballo, & Salvatore, 2002; Mayer-Gross, 1935; Sedman & Kenna, 1963), and is frequently associated with depressive mood, alexithymia, and insecure personality (Maggini et al., 2002; Sedman & Kenna, 1963).

The introduction of the dissociative disorders in the DSM-III renewed the clinical and scientific interest in the concept of dissociation and brought about a different perspective with respect to dissociative phenomena in psychotic patients. Clinical observations drew attention to both their co-occurrence and differential diagnosis. For example, Steingard and Frankel (1985) reported a 17-year-old girl presenting with a diagnosis of bipolar affective disorder, rapid cycling type, who appeared to be more accurately suffering from dissociative episodes manifested as psychotic states. Likewise, Giese, Thomas, and Dubovsky (1997) described three patients with psychotic mood disorders and prominent dissociative symptoms that remitted with successful somatic treatment. Two patients from India, one with bipolar affective disorder and the second with schizophrenia, were reported to have suffered from a dissociative loss of consciousness during their psychotic episodes (Gupta & Chawla, 1991) and other patients have fulfilled diagnostic criteria for both a dissociative and a psychotic disorder (Alao, Tyrrell, Yolles & Armenta, 2000; Offringa & Goff, 1995). The valuable contributions of these case reports are supplemented by systematic and empirical research reviewed in the following section.

Empirical Studies on Dissociation in Patients Diagnosed with Schizophrenia

The majority of studies in this area have used the Dissociative Experiences Scale (DES) by Bernstein and Putnam (1986), the most widely used questionnaire in the field of dissociation research (Van IJzendoorn & Schuengel, 1996). An overview of investigations using the DES in schizophrenia spectrum disorders is given in Table 11.1.

These studies have focused on three major issues: (i) the relationship of dissociative experiences to features of the schizophrenic disorder such as psychopathology, chronicity, and comorbidity; (ii) the association between dissociation, trauma (particularly child maltreatment), and post-traumatic stress disorder (PTSD) within schizophrenic patients; and (iii) the differential diagnosis between dissociative disorders and schizophrenia, as well as their overlap and co-occurrence.

The Relation Between Dissociative Phenomena and Schizophrenic Psychopathology

There is solid empirical evidence, primarily from DES studies, that persons diagnosed with schizophrenia experience dissociative phenomena more often and to a higher degree than non-clinical individuals, but with lower intensity and frequency than patients with borderline personality disorder (BPD), PTSD, and dissociative identity disorder (DID; for a review see Renard et al., 2017). The reported mean in these studies (in some cases, the median) ranges between 15 and 30 (see Table 11.1). These figures are markedly higher than mean scores from non-clinical samples (ranging between 4 and 12), but lower than scores reported for subjects with PTSD (25–41) and DID (42–57) (reviewed by Carlson & Putnam, 1993; Putnam et al., 1996; Van IJzendoorn & Schuengel, 1996).

Within the group of patients with schizophrenia spectrum disorders, both the range of DES scores and the standard deviations are surprisingly high. For example, Modestin and co-workers reported the mean DES score of outpatients with schizophrenia spectrum disorders in remission to be 9.9, with a standard deviation of 6.8 (Modestin, Hermann, & Endrass, 2007). In contrast, Ross and Keyes (2004) found that 60% of their schizophrenic patients had DES scores of 25 or above, with a mean of 28.5. These divergent figures call for an explanation. Obviously, the stage of the disorder seems to play an important role. Investigations including schizophrenic patients in remission generally report lower DES scores, with means ranging from 9.9 to 15.3 (Brunner, Parzer, Schmitt, & Resch, 2004; Modestin et al., 2007; Schäfer et al., 2006; Schäfer et al., 2012; Vogel, Spitzer, Barnow, Freyberger, & Grabe, 2006). Similar to Modestin et al. (2007), Brunner et al. (2004) studied their schizophrenic patients during a period of remission of the positive symptoms and found relatively low mean DES scores of 14.0. Correspondingly, in an inpatient study of 145 patients with schizophrenia spectrum disorders, there was a significant decrease of DES mean scores from 19.2 at admission to 14.1 at a second interview, which took place when patients were stabilized, on average three weeks later (Schäfer et al., 2012). Studies including patients irrespective of the stage of their illness consistently find higher mean DES scores (Bob, Glaslova, Susta, Jasova, & Raboch, 2006; Glaslova, Bob, Jasova, Bratkova, & Ptacek, 2004; Hlastala & McClellan, 2005; Horen, Leichner, & Lawson, 1995; Perona-Garcelàn et al., 2008; Putnam et al., 1996;

Table 11.1 Selected studies using the Dissociative Experiences Scale (DES) in patients with schizophrenia spectrum disorders.

Study	Sample	DES score	Further findings
Spitzer, Haug, and Freyberger (1997)	*Schizophrenia spectrum* (N = 27; ICD-10) *Controls* (N = 27; matched for age and sex)	M = 15.8 (±10.5) M = 5.5 (±3.0)	Higher DES scores in patients with more positive symptoms; strong correlations with delusions and hallucinations.
Ross and Keyes (2004)	*Schizophrenia* (N = 60; DSM-IV)	Low dissociation group N = 24 (40%) M = 4.6 High dissociation group N = 36 (60%) M = 28.5	Dissociation associated with comorbidity, positive and negative symptoms.
Hlastala and McClellan (2005)	*Schizophrenia* (N = 27; DSM-IV using SCID) *Atypical psychotic symptoms* (N = 20) *Bipolar disorder*(N = 22)	M = 26.9 (±21.5) (N = 17) M = 34.9 (±19.4) (N = 16) M = 19.0 (±18.0) (N = 16)	Only adolescent patients aged 14.8 years (± 2.2) reporting dissociation included. DES scores significantly higher in adolescents with 'atypical psychotic symptoms' (e.g. context-specific hallucinations) than other two groups.
Schäfer et al. (2006)	*Schizophrenia spectrum* (N = 30; DSM-IV using SCID)	Acutely ill: M = 21.0 (±17.7) Remitted: M = 11.9 (±9.9)	Significant decrease of DES scores over time, no correlation between DES and positive and negative symptoms.
Bob, Glaslova, Susta, Jasova, and Raboch (2006)	*Schizophrenia* (N = 82; DSM-IV) *Controls* (N = 50)	M = 15.7 (±8.5) ≥25 : 30% M = 8.5 (±9.0)	
Vogel, Spitzer, Barnow, Freyberger, and Grabe (2006)	*Schizophrenia spectrum* partly remitted (N = 87; ICD-10) *Controls* (N = 297)	M = 15.3 (±14.1) M = 6.4 (±5.3)	DES scores significantly higher in patients with trauma histories and PTSD (N = 14, 21.0 ± 15.8) than in patients without trauma histories (N = 30, 11.4 ± 11.2).
Modestin, Hermann, and Endrass (2007)	*Schizophrenia spectrum* outpatients in remission (N = 43: *ICD*-10) *Personality disorders* (N = 47) *Controls* (N = 42)	M = 9.9 (±6.8) M = 11.5 (±11.8) M = 7.6 (±6.3)	No significant differences between the groups in DES scores.

Table 11.1 (Continued)

Study	Sample	DES score	Further findings
Şar et al. (2010)	*Schizophrenia* (N = 70; DSM-IV using SCID)	M = 18.1 (±16.6).	Significant correlations between DES scores and other characteristics such as secondary features of DID, borderline personality disorder criteria, Schneiderian symptoms, extrasensory perceptions, somatic complaints, number of lifetime and current SCID diagnoses, CTQ, and negative and positive symptoms of schizophrenia.
Schäfer et al. (2012)	*Schizophrenia spectrum* (N = 145; DSM-IV using SCID)	Acutely ill: M = 19.2 (±15.0) Remitted: M = 14.1 (±(12.0)	Dissociative symptoms significantly decreased over time. Prediction of dissociation was by PANSS positive subscale in acute state; by sexual abuse in stabilized state.

Ross & Keyes, 2004; Şar et al., 2010; Spitzer, Haug, & Freyberger, 1997; Varese, Barkus, & Bentall, 2012). These investigations yielded mean scores between 15.7 and 42.6, indicating a relationship between acute symptoms of schizophrenia and dissociative phenomena. In a study of 27 patients with schizophrenia spectrum disorders, Spitzer et al. (1997) found a close association between dissociative symptoms and positive symptoms as measured by the Positive and Negative Syndrome Scale (PANSS; Kay, Fiszbein, & Opler, 1987). Patients with a predominance of positive symptoms had significantly higher DES mean scores as compared to patients with a predominance of negative symptoms (M = 21.1 vs. M = 9.2). Delusions and hallucinations were strongly and positively related to the DES total score and most subscales of the DES, while there were only few significant correlations between dissociation and other positive psychotic symptoms. Likewise, Ross and Keyes (2004) and Kilcommons and Morrison (2005) indicated that dissociation is associated with positive schizophrenic features, particularly hallucinations. Correspondingly, the relationships between positive symptoms as measured by the PANSS and dissociation in the acute phase of the illness was replicated in a more recent study (Schäfer et al., 2012).

Inconsistent findings have been reported with respect to the relationship between negative schizophrenic symptoms and dissociative phenomena. While one study (Spitzer et al., 1997) found that passive social withdrawal was inversely related to the DES and its subscales, Ross and Keyes (2004) suggested that highly dissociative schizophrenic patients endorse more negative symptoms than low dissociators. They also

indicated a positive association between dissociation and psychiatric comorbidity. Vogel, Braungardt, Grabe, Schneider, and Klauer (2013) performed a factor analysis in a sample of 74 patients with schizophrenia spectrum disorders on the basis of the Association for Methodology and Documentation in Psychiatry (AMDP) module on dissociation. Depersonalization/derealization was related to the positive symptoms subscale of the PANSS, whereas the factor containing amnesia was associated with the negative subscale. In a sample of 70 chronically ill schizophrenia patients, Şar et al. (2010) assessed negative and positive symptoms with the Scales for the Assessment of Negative (SANS) and Positive (SAPS) Symptoms (Andreasen, 1990). In this study, both negative and positive symptoms were significantly correlated with the DES total scores.

In sum, while evidence for a close relationship between dissociation, particularly depersonalization and derealization, and positive symptoms of schizophrenia is growing, evidence is starting to emerge that these relationships might be mediated or at least influenced by other cognitive and emotional domains; however, there are still many inconsistencies that need to be resolved.

Dissociation and Trauma

Despite the high rate of trauma in patients with psychotic disorders (see Scott et al., Chapter 9 in this book), relatively few studies have focused on a potential link between traumatic experiences and dissociation in this population group. Most of the existing findings, however, support such a relationship. In an early study, Goff, Brotman, Kindlon, Waites, and Amico (1991a, 1991b) examined associations between childhood trauma, dissociation, and other symptoms (e.g. delusions of possession and voices heard inside the head), among 61 patients with psychotic disorders. Patients with a history of childhood physical and/or sexual abuse (43% of the overall sample) reported significantly higher DES scores than patients without abuse experiences ($M = 20.0 \pm 16.1$ vs. $M = 12.5 \pm 12.4$). Sexual abuse correlated more strongly with dissociation than physical abuse ($r = 0.34$ vs. $r = 0.19$). Other significant correlations were found between childhood trauma and both delusions of possession and voices heard inside the head. While the patients in this study suffered from chronic psychotic disorders, similar relationships between childhood sexual and/or physical abuse and dissociation have been reported in a first psychotic episode sample (Greenfield, Strakowski, Tohen, Batson, & Kolbrener, 1994). Ross and Keyes (2004) divided their sample of 60 schizophrenic patients into two groups on the basis of DES scores and a diagnosis of a dissociative disorder with the Dissociative Disorders Interview Schedule (DDIS; Ross, Heber, Norton, Anderson, Anderson, & Barchet, 1989). The 60% of patients who *either* scored ≥25 on the DES *or* received a diagnosis of a dissociative disorder in the clinical interview reported significantly more sexual and/or physical abuse, had more severe trauma histories, and more psychiatric comorbidity compared to patients from the group with lower scores (DES ≤ 10 *and* negative for a dissociative disorder on the DDIS). In two other studies, the Trauma Symptom Checklist (TSC-40; Briere, 1996) was used to estimate relationships between childhood sexual abuse and dissociation in schizophrenic patients (Bob et al., 2006; Glaslova et al., 2004). In both studies, DES scores correlated significantly with the Sexual Abuse Trauma Index of the TSC-40 ($r = 0.50$ and $r = 0.54$, respectively). Other studies used the Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998), which assesses emotional abuse and emotional and physical neglect in addition to childhood sexual and physical abuse. Interestingly, some studies observed the strongest

relationships between dissociative symptoms and childhood *emotional* abuse (Braehler et al., 2013; Holowka, King, Saheb, Pukall, & Brunet, 2003; Schäfer et al., 2006), a finding also reported for other diagnostic groups (Schäfer et al., 2010; Simeon, Guralnik, Schmeidler, Sirof, & Knutelska, 2001; Ural, Belli, Akbudak, & Tabo, 2015). Braehler et al. (2013), for instance, compared 62 first-episode psychotic patients, 43 chronic psychotic patients, and 66 non-psychotic community controls (n = 66) with regard to levels of dissociation. More severe childhood trauma, especially emotional abuse, was associated with higher levels of dissociation in all three groups, while the highest levels of dissociation and the strongest relationship with childhood trauma was found in the group with chronic psychosis. Other studies reported differing results. Vogel et al. (2009) found physical neglect to be associated with high dissociation in 80 patients diagnosed with schizophrenia, while no relationships were found with different forms of abuse. Şar et al. (2010) found that physical neglect and physical abuse predicted dissociation in 70 patients with a schizophrenic disorder, while sexual abuse in childhood was the best predictor of dissociative symptoms in another study among 145 patients with schizophrenia spectrum disorders (Schäfer et al., 2012). In a recent South Korean study examining 89 schizophrenic inpatients, all five types of childhood trauma were associated with dissociative symptoms (Chae, Sim, Lim, Na, & Kim, 2015). Moreover, there is evidence that childhood adversities, such as recurrent physical illness, depression, or substance abuse in the parents, also explain some of the variance in dissociative symptoms in patients with schizophrenia spectrum disorders (Schroeder, Langeland, Fisher, Huber, & Schäfer, 2016).

Dissociative Disorders in Patients Diagnosed with Schizophrenia

Both clinical observations and empirical research has indicated that dissociative symptoms are common in schizophrenic patients. Several studies examined whether – at least in a subgroup of patients – these symptoms reflect more severe dissociative phenomena or are even part of a dissociative disorder. For example, some of the studies using the DES have applied a cut-off score (e.g. 25 or 30) to determine the proportion of high dissociators in this diagnostic group. Previous research has suggested that persons scoring above those cutoff points may be suffering from a dissociative disorder, and should be further assessed using a diagnostic interview (e.g. Carlson et al., 1993). Horen and co-workers (1995) reported that 16% of the schizophrenic patients in their sample had DES scores of 25 or above. Similarly, Putnam et al. (1996) found that 20% of the subjects with schizophrenia spectrum disorders scored above 30 on the DES. In other studies, the percentages of high dissociators in schizophrenic patients (e.g. those with DES scores ≥ 25) ranged between 31 and 60% (Bob et al., 2006; Glaslova et al., 2004; Ross & Keyes, 2004).

Another approach to categorizing persons on the basis of their DES results involves the concept of pathological dissociation, defined as a dissociative 'taxon' based on a subscale of the DES (Waller, Putnam, & Carlson, 1996). Waller and Ross (1997) suggested that pathological dissociation is closely related to some diagnostic groups and most subjects with pathological dissociation would qualify for the diagnosis of either a dissociative disorder or PTSD or, to a lesser extent, schizophrenia. In their sample of 61 schizophrenic patients, 8% were classified as belonging to the pathological dissociation group (Waller et al., 1996). However, these findings have been called into question by other researchers (Modestin & Erni, 2004; Putnam et al., 1996; Welburn et al., 2003), and it has been argued that high dissociators and patients with pathological dissociation

are distributed across all diagnostic groups. While the findings of studies using taxonomic approaches to dissociation in schizophrenia remain inconclusive, some studies have applied reliable diagnostic interviews, primarily the Structured Clinical Interview for DSM Dissociative Disorders (SCID-D; Steinberg, 1993), or the Dissociative Disorder Interview Schedule (DDIS; Ross, Heber, Norton, Anderson, Anderson, & Barchet, 1989). These investigations are summarized in Table 11.2.

Table 11.2 Studies using structured interviews to assess dissociative disorders in patients with schizophrenia spectrum disorders.

Study	Sample	Interview	Findings
Ross, Heber, Norton, & Anderson, 1989	*Schizophrenia* (*N* = 20) *Multiple personality disorder* (*N* = 20) *Panic disorder* (*N* = 20) *Eating disorders* (*N* = 20)	DDIS	3 schizophrenic patients (15%) met criteria for psychogenic amnesia, 6 (30%) for depersonalization disorder. MPD patients differed significantly from other groups on a large number of items. MPD patients reported more Schneiderian symptoms than schizophrenic patients. Some limitations were present (schizophrenia group comprised more male patients, older than other groups)
Steinberg, Cicchetti, Buchanan, Rakfeldt, & Rounsaville, 1994	*Schizophrenia spectrum* (*N* = 31; 17 *schizophrenia,* 14 *schizoaffective disorder),* *Multiple personality disorder* (*N* = 19)	SCID-D	28 out of 31 patients with schizophrenia spectrum disorders (90%) did not meet the diagnosis of any dissociative disorder, 3 patients (10%) were newly diagnosed as having MPD. The MPD patients showed significantly higher SCID-D symptom scores and total scores as compared to the schizophrenia spectrum patients.
Haugen & Castillo, 1999	*Schizophrenia spectrum* (*N* = 50)	SCID-D	6 patients (12%) met diagnostic criteria for past dissociative disorder, 25 (50%) met diagnostic criteria for current dissociative disorder (36% dissociative identity disorder or dissociative trance disorder). Dissociative disorders significantly more frequent in schizophrenic patients as compared to schizoaffective patients. Differences according to ethnic background.
Ross & Keyes, 2004	*Schizophrenia* (*N* = 60)	DDIS DES SANS SAPS	16 (44%) schizophrenic patients with high levels of dissociation (DES >25) fullfilled criteria for DID according to DDIS. Significantly more DDIS symptom clusters in this group (somatic symptoms, borderline criteria, ESP/paranormal experiences, Schneiderian symptoms).
Yu et al., 2010	Schizophrenia (*N* = 96)	DES DDIS Clinical interview based on DSM-IV	28 (29.2%) had a dissociative disorder, most often dissociative amnesia (11, 11.5%), 2 (2.1%) had a dissociative identity disorder. Patients with dissociative disorders reported more childhood abuse than those without (57.1 vs. 22.1%).

Welburn et al. (2003) used the SCID-D to compare patients with schizophrenia, DID, and feigned dissociation. Significantly lower average overall severity rating of the symptoms measured by the SCID-D were found in the schizophrenia group (N = 9) compared to the DID group (N = 12; 11.0 vs.19.1, respectively). Steinberg, Cicchetti, Buchanan, Rakfeldt, and Rounsaville (1994) reported similar results in a study comparing 31 patients with schizophrenia spectrum disorders to 19 patients with multiple personality disorder. Ross, Heber, Norton, and Anderson (1989) found that 3 out of 20 patients with clinically diagnosed schizophrenia (15%) met the diagnostic criteria for dissociative amnesia and six (30%) met the diagnostic criteria for depersonalization disorder as assessed with the DDIS. In another study by Ross and colleagues (Ross & Keyes, 2004), 44% of highly dissociative schizophrenic patients (i.e. those scoring 25 or above on the DES or those who received the diagnosis of a dissociative disorder in the clinical interview) were diagnosed with DID according to the DDIS. The most recent study using the DDIS (Yu et al., 2010) examined comorbid dissociative disorders in a sample of 569 patients with schizophrenia. A subsample of 96 patients was selected (with use of a random number table) on the basis of DES scores: 10% of those scoring from 0 to 10, 30% of those scoring from 11 to 20, 50% of those scoring from 21 to 40, and 100% of those scoring above 41. These patients were interviewed with the DDIS and a clinical interview based on DSM-IV criteria. Twenty-eight (29.2%) of this subsample received a clinical diagnosis of a dissociative disorder based on DSM-IV criteria. The authors then predicted the prevalence of a DSM-IV dissociative disorder for the whole sample of 569 patients. They calculated a weighted prevalence based on the number of participants in each dissociation score range who were interviewed in step two of the study, predicting that 87 (15.3%) of the 569 inpatients had a dissociative disorder. Steinberg et al. (1994) found 10% of patients with schizophrenia spectrum disorders to meet criteria for multiple personality disorder (DID) on the SCID-D. In contrast, an earlier study, using the same instrument, found 50% of their 50 patients with schizophrenia or schizoaffective disorders to meet diagnostic criteria for a dissociative disorder (Haugen & Castillo, 1999). High percentages of patients displayed severe dissociative symptoms, including amnesia (34%), depersonalization (48%), derealization (22%), identity confusion (46%), and identity alteration (56%; Haugen & Castillo, 1999).

These findings have drawn scientific and clinical attention to issues of differential diagnosis between schizophrenia and dissociative disorders (see Steinberg, Chapter 21 of this book), and to questions of comorbidity or continuity between schizophrenia and dissociative conditions.

Dissociation in Schizophrenia Spectrum Disorders – What Could It Mean?

As dissociation is thus a common feature in schizophrenia, there is need for clarifications and explanations of this association. Despite ongoing research activities, some questions remain unanswered. For instance, more research is needed to clarify whether a highly dissociative subgroup of schizophrenic patients exists (Ross, 2004) or if many psychotic symptoms have a dissociative underpinning (Moskowitz, Read, Farrelly,

Rudegeair, & Williams, 2009). While both hypotheses are not mutually exclusive, the first one seems to be supported by data on subgroups of high dissociators in the acute phase of the illness (Bob et al., 2006; Glaslova et al., 2004; Ross & Keyes, 2004) and even after the remission of psychotic symptoms (Schäfer et al., 2012). Ross and Keyes (2009) identified a dissociative type of schizophrenia according to the criteria of Ross (2004) in 22% of their 50 cases. With a different approach, Şar et al. (2010) classified their sample through *k*-mean cluster analysis into four groups, two of which were high dissociation groups. Similar to Ross and Keyes (2009), they found that approximately a quarter of the patients belonged to one of the dissociative subgroups. These patients were characterized by a higher number of psychiatric comorbidities as well as by many secondary features of dissociative identity disorder, Schneiderian symptoms, and somatic complaints. Laferriere-Simard, Lecomte, and Ahoundova (2014) suggested a more conservative approach and stressed the relevance of dissociative symptoms as opposed to nonspecific symptoms (e.g. extensive comorbidity) for a dissociative subtype of schizophrenia. In their study among 50 patients with psychotic disorders, they classified 14% as belonging to a dissociative subtype when at least 1 of 3 dissociative symptoms were required to be present. In a recent review by Renard et al. (2017) the authors argue that combining the network structure model of psychopathology (Borsboom, Cramer, Schmittmann, Epskamp, & Waldorp, 2011), which hypothesizes that disorders result from a causal interplay between symptoms (Borsboom & Cramer, 2013), with a dimensional model might help to clarify the apparent close relationship between schizophrenia and dissociative disorders (Renard et al., 2017).

The relationship between early trauma and dissociation in patients with psychotic disorders is in line with similar findings for many other diagnostic groups, including patients with substance use disorders (e.g. Schäfer et al., 2010), borderline personality disorder (e.g. Bosch van den, Verheul, Langeland, & Van den Brink, 2003), and panic disorder (Ural et al., 2015). However, in patients with psychotic disorders, the delusional elaboration of phenomena may hide their dissociative character. For instance, rather than being indicative of a 'disorder of self', feelings of passivity or being influenced by something outside the own person might be a delusional elaboration of dissociative phenomena. Indeed, delusional interpretations of dissociative phenomena might be at the core of many psychotic symptoms (Moskowitz et al., 2009), an obvious example being 'delusions of possession' (Goff et al., 1991a). In psychotic patients with a history of childhood trauma, dissociative symptoms, emerging in the context of depression, insecure personality, alexithymia, and other disturbances (e.g. Modestin et al., 2007; Sedman & Kenna, 1963), may be independent consequences of childhood trauma.

In other patients, severe psychosis might include dissociation-like symptoms arising from a different process. In the framework of 'disorders of self', these experiences should be limited to phenomena like depersonalization, derealization, and identity confusion, but not include identity alteration and severe amnesia. However, overwhelming affect, formal thought disorder, or other severe psychotic symptoms may interfere with psychological processes involved in memory and perception, leading to transient amnesia and other severe dissociative symptoms in some patients (Giese et al., 1997).

A perspective that has been taken by several authors in recent years is that other cognitive and emotional domains, such as self-focused attention, metacognitive beliefs, inner speech, recognition of negative emotions, or self-concept clarity, might interact with dissociative and psychotic symptoms. Their role in the emergence of psychotic

symptoms could be mediated by dissociation (Alderson-Day et al., 2014; Perona-Garcelàn et al., 2011), dissociation could be a predictor for poorer performance in these domains (Renard, Pijnenborg, & Lysaker, 2012), or they could in other ways be related to dissociative and/or psychotic symptoms (e.g. Perona-Garcelàn et al., 2012).

Problems may arise from difficulties in reliably assessing dissociation in acutely ill patients. Horen et al. (1995) reported that schizophrenia was the most common diagnosis (70%) among the patients they had to exclude from their study, and people with schizophrenia had frequent problems in completing the DES. Delusional patients can have problems in understanding the items of the DES and it can be difficult to distinguish dissociative phenomena from delusions (Steinberg et al., 1994). These issues emphasize that more attention has to be paid to methodological issues when dissociation is assessed in psychotic patients, and that diagnostic interviews should be more systematically used to confirm the findings of self-rating instruments.

Conclusion

Dissociative symptoms, as measured by clinical instruments, are common in patients diagnosed with schizophrenia. Dissociation in psychosis appears to be a multifaceted, complex phenomenon, with several different mechanisms involved. At least in a subgroup of patients, severe dissociative symptoms, often in combination with a history of childhood trauma, suggest a comorbid dissociative disorder or, alternatively, a hybrid dissociative/psychotic state. In other patients, dissociative phenomena may be related to the psychotic illness. In patients with definite dissociative symptoms, it remains to be clarified whether they represent a superimposed phenomenon, which nevertheless might interact with other symptom domains, or if more basic relationships exist with psychotic symptoms. Future studies should try to examine the different potential pathways, taking more thoroughly into account the potential mediating factors and methodological pitfalls. From a clinical point of view, the high prevalence of dissociative symptoms in patients with schizophrenia underscores the need for systematically taking a trauma history and for offering treatments developed for dissociative disorders to this group of patients.

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12

Psychotic Symptoms in Dissociative Disorders

Vedat Şar and Erdinç Öztürk

Psychotic symptoms may occur in dissociative identity disorder (DID), in its partial presentations, and in acute dissociative conditions. There have been only a few studies comparing psychotic symptoms in these disorders with those present in psychotic disorders (Dorahy et al., 2009). In this chapter, we summarize clinical observations and the existing empirical data on the prevalence and significance of psychotic symptoms in dissociative disorders.

Hallucinations

In clinical series, 80–90% of patients with DID report hearing voices (i.e. auditory hallucinations; Loewenstein, 1991; Ross et al., 1990a; Şar, Yargiç, & Tutkun, 1996). They may be attributed by the patient to a distinct personality of one's own, to a 'foreign entity' localized within the person, to an imaginary companion, or to an external source influencing them (i.e. possession). Many patients associate these experiences with the frightening idea of 'losing their mind' due to a severe mental illness. Thus, they tend to hide these symptoms and disclose them only when questioned by a reliable clinician.

While it is a long-held clinical belief that internally experienced hallucinations ('voices inside of the head'), sometimes called 'pseudo-hallucinations' (Van der Zwaard & Polak, 2001), are more typical of dissociative rather than psychotic disorders (Stephane, Thuras, Nasrallah, & Georgopoulos, 2003), many have begun to question this distinction, or even whether the perceived location of auditory hallucinations has any clinical importance (Copolov, Trauer, & Mackinnon, 2004; Dorahy et al., 2009; Honig et al., 1998; Moskowitz & Corstens, 2007). In those studies which directly compared DID and schizophrenia patients on the perceived location of the voices, there were no significant differences (Dorahy et al., 2009). However, Dorahy et al. (2009) found that patients with DID were more likely to have started hearing voices before 18 years of age, heard more than two voices, and had both child and adult voices. Thus, rather than the perceived location, features important for differential diagnosis are those consistent with the presence of dissociative identities (e.g. several voices of different perceived 'ages'). In another study, patients with DID had higher scores on scales that measure child voices, angry

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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voices, persecutory voices, and voices commenting, compared to those with schizophrenia (Laddis & Dell, 2012; see also Chapter 13 in this book).

The capacity of a 'voice' to enter into a dialogue with the examining clinician is clinically observed to be common in dissociative disorders (Putnam, 1989). The responsiveness of the 'voices' typically results from dissociative identities talking. They constitute aspects of an internal dialogue one can partake in from the outside. However, due to a lack of awareness about the nature of the condition, many patients do not consider the hallucinatory internal dialogues to be dissociative identities communicating. Some may even believe that they were experiences common to everyone, because they usually begin in the early years of life and one gets used to them (Dorahy et al., 2009). Many people struggling with these experiences attempt to find their own ways of managing voices, before reaching out for therapeutic intervention. This kind of symptom typically disappears abruptly after fusion of the related dissociative identities (i.e. integration).

Visual hallucinations are also common in dissociative disorders (Putnam, 1989). They may be of an elementary nature (light, etc.), or, more commonly, of a dramatic character: a person (e.g. an old man with beard), an animal (such as a snake), or an unidentifiable creature. The patient may also hallucinate dissociative identities visually as imaginary companions (Kluft, 1985). Some patients see these imaginary companions as real, relating to them as 'friends'. These imaginary companions, distinct personality states perceived as existing 'outside', may also be hostile in nature.

Dissociative patients may also have hallucinations which are not voices or images of another dissociative identity. These are what Janet termed secondary fixed symptoms This occasionally can be seen when hostile dissociative identities generate hallucinations in order to frighten the host personality by producing visions (such as seeing himself fixed and hanging on a wall, or strange not-quite-human faces), by producing sounds such as screams, or even terrifying tastes, smells, or bodily sensations. This condition may appear as an acute psychotic condition superimposed on DID (Tutkun, Yargic, & Şar, 1996). The source of these experiences is usually unknown at the beginning, but gradually becomes evident. The aim of these actions is often to punish the host personality. Alternatively, the dissociative identity may be trying to overcome the denial of the host personality that may be amnesic for painful experiences (Sakarya, Gunes, Ozturk, & Şar, 2012). In this case, the content is more reality oriented and covers the patient's experiences, although in a decontextualized manner, while being characterized by strong sensory, motor, and perceptual representations (Brewin, 2001). They may take the form of flashback experiences, part of the constellation of symptoms that dissociative disorder patients share with post-traumatic stress disorder (PTSD) and which are by definition hallucinatory in nature (Putnam, 1989). They may also be triggered by environmental stimuli. Frightening intrusive mental images also occur. These experiences are similar to flashbacks but differ in that the patient can tell that they are not actually happening currently.

Grossly Disorganized Behaviour

Patients with a dissociative disorder may exhibit grossly inappropriate behaviour when in a severe crisis. This may happen due to switching between dissociative identities. Flashback episodes which can generate non-epileptic seizures and/or other

sensorimotor (conversion) symptoms, self-mutilative behaviour due to the influence of a persecutory identity, or a more generalized breakdown of dissociative defences, can also create inappropriate behaviour. This breakdown may extend to a transient 'dissociative psychosis' (i.e. an acute dissociative disorder with psychotic features, discussed below). In a newly hospitalized dissociative patient, struggles with persecutory and/or suicidal dissociative identities will often initiate these daily crises. Depending on several factors, including the quality of the therapeutic intervention aimed at stabilizing the patient, these kinds of crises will likely cease in a few weeks. When in a crisis period, child dissociative identities may cause grossly inappropriate and apparently 'regressive' behaviour (e.g. defecating outside of a bathroom or playing like a child). In many patients, 'child alters' pass without being recognized by an observer because they are able to adjust their style according to social requirements.

Formal Thought Disorder

Formal thought disorder is related to the disturbances in thought flow as observed in conversation with the patient. Loosening of associations, blocking, circumstantiality, tangentiality, verbal stereotypy, and neologisms are among these disturbances. They are specific clues of a psychotic disorder. Dissociative patients usually have no formal thought disorder. However, at times, they may *appear* to have a profound formal thought disorder. Switching between alters or intra-interview amnesia may mimic blocking in thought flow. The patient will appear to have signs of a major thought disorder, including blocking, thought withdrawal, even 'word salad' (Putnam, 1989). However, there is no associative loosening, no neologisms, and no verbal stereotypies. This happens only when a patient is in a severe crisis.

Impairment in Reality Testing: Trance-Logic or Genuine Delusions?

The American Psychiatric Glossary defines 'reality testing' as the ability to evaluate the external world objectively and to differentiate adequately between it and the internal world (Stone, 1988). Impaired reality testing is one of the major hallmarks of psychosis. Reality testing is intact in patients with dissociative disorders except during dissociative psychotic episodes, which may constitute crisis states superimposed on the ongoing dissociative pathology. The dissociative patient's claim of having another person inside of him, or of having more than one personality, should not be considered a delusion. Such claims do not originate from a primary thought disorder, but rather from the internal experience itself. In contrast, the delusions of a schizophrenic patient typically constitute a primary thought disturbance.

Although the 'internal world' is much more developed in DID, it is rarely confused with 'external reality'. When it happens, it does so only in a time-limited and/or circumscribed fashion. 'Trance-logic' (i.e. the tolerance and/or rationalization of logical inconsistency while in a hypnotic state), which is a core aspect of the cognition of DID patients (Loewenstein, 1993), allows the patient to adjust to 'normal' daily life while maintaining

beliefs which are not only inconsistent with external reality but also may be contradictory among themselves. This is a phenomenon resembling one of Bleuler's (1911) observations of schizophrenia (without mentioning dissociation) – 'double bookkeeping' (doppelte Buchführung). Dissociation allows the existence of several different (subjective) versions of reality within one person. Thus, Kluft (1993) once called DID 'multiple reality disorder' (instead of 'multiple personality disorder') and referred to 'alternating reality states' (Kluft, 2003); Chefetz (2004) refers to identity alteration in DID as 'isolated subjectivities'.

One intriguing aspect of such trance-logic that has important behavioural consequences is related to variations in the belief that dissociative identities are separate. At the extreme end, one finds patients who view dissociative identities as almost like 'real-world friends'. In some cases, the 'murderous' intention of a 'persecutory' personality against the 'host' personality may end up in what appears like a suicide attempt, or even a completed suicide, because there is a failure to comprehend that both parts belong to the same person. Putnam (1989) has called this phenomenon 'internal homicide'.

Such experiences can also mimic paranoid conditions, as when a persecutory dissociative identity is projected onto a person or directly perceived as a hallucination in the outside world. This would look like a delusion of persecution from outside unless the dissociative identities involved are identified as the source of the experience. Nevertheless, with the exception of this 'circumscribed psychosis' attributable to the separateness of dissociative identities, even these patients do not lose reality testing in other domains of life.

Dissociative patients usually have insight about the illness quality of their symptoms whereas schizophrenia mostly results in severe loss of insight about the pathological quality of the process. In an empirical study, patients with a dissociative disorder had better cognitive insight (Beck, Baruch, Balter, Steer, & Warman, 2004) than patients with a schizophrenic disorder, and did not differ from those with obsessive compulsive disorder or major depression (Şar et al., 2012). However, unlike the latter two groups, dissociative patients were similar to the schizophrenic group in terms of heightened 'self-certainty', but their 'self-reflection' scores were better, which placed their overall cognitive insight in the non-psychotic range.

Schneiderian Symptoms: Are they Non-specific?

Certain kinds of hallucinations and delusions are called Schneiderian symptoms, and have been considered typical of schizophrenia (Schneider, 1946/1976; see Chapter 4 of this book). Schneiderian auditory hallucinations are characterized as voices talking about the patient, commenting on their thoughts, or as repeating them. Subjective experiences of thought withdrawal, thought insertion, thought broadcasting, audible thoughts, and thoughts different from the patient's own are also considered Schneiderian symptoms. Other symptoms include feeling that one's will is replaced by that of some other force or agent, and that one has ego-alien wishes, is moved by some external force (as in handwriting), speaks words that are not one's own, or are controlled in some other way (i.e. feeling like a 'robot' or 'automaton'). Finally, delusional perception, another Schneiderian symptom, refers to a two-stage phenomenon consisting of a normal perception followed by a sudden delusional revelation or interpretation of highly personalized significance.

Indeed, most Schneiderian symptoms represent the loss of subjective experience and the perception of an autonomous existence of an individual created by severe depersonalization (loss of sense of self and agency). Hence, such symptoms are about being directed as a 'slave' by an omnipotent power (e.g. a master, dictator, or any figure of authority). Ross and Joshi (1992) documented a relationship between reports of childhood trauma and Schneiderian symptoms in the general population. While this observation may be related to psychotic and/or trauma-related dissociative disorders in the community, there is an overt analogy to the type of relationships seen among victims of developmental trauma (i.e. 'attachment to the perpetrator' and 'locus of control shift'; Ross, 1997). This type of relationship resembles the dominance–submission pattern of an abusive interpersonal situation.

In contrast to Schneider's original proposal, these symptoms are no longer considered pathognomonic for schizophrenia. They have been observed in patients with bipolar disorder (Conus, Abdel-Baki, Harrigan, Lambert, & McGorry, 2004; Gonzalez-Pinto et al., 2003) and DID (Kluft, 1987; Ross et al., 1990b). In two series with DID, 89% of patients on average reported three or more Schneiderian symptoms (Ross et al., 1990a; Şar et al., 1996). In the general population, women with a dissociative disorder had 2.4 Schneiderian symptoms on average; this rate was 0.3 for non-dissociative women (Şar, Akyüz, & Dogan, 2007). Patients with dissociative disorders may report hearing voices talking, arguing, or screaming in their heads. The voices may be pejorative and critical or supportive. They may comment on the patient's thoughts or actions. The patients may also have passive influence phenomena, such as the experience of their bodies being controlled by an outside force, or thought withdrawal. In comparison with schizophrenic disorder, patients with DID had higher passive influence scores (Laddis & Dell, 2012). A common passive influence symptom is automatic writing. 'Made' thoughts, feelings, and impulsive actions are also commonly experienced in DID.

However, patients with dissociative disorder rarely express feelings of thought diffusion, thought projection, or delusional perception. In psychotic disorders, passive influence experiences are not attributed to dissociative identities and they often have a character of absolute certainty. In dissociative disorders, passive influence experiences can be reflected on by the patient, and are related to dissociative identity activities. In many schizophrenia cases, the 'delusional perception' comes first and the patient interprets his environment in a new way (Schneider, 1946/1976). Sometimes, the first experience is change of mood, often a feeling of anxiety with the foreboding that some sinister event is about to take place, and the delusion follows. This change of mood is called 'delusional mood' (Wahnstimmung). Neither delusional mood nor delusional perception is common in dissociative disorders (Kluft, 1987). Consequently, patients with schizophrenic disorder have higher delusion scores than those with DID (Laddis & Dell, 2012).

Interestingly, a comparison between dissociative and non-dissociative psychiatric patients (including those with a psychotic disorder) on the Structured Clinical Interview for DSM-IV Dissociative Disorders (Steinberg, 1994) did not reveal differences in experiences of possession (Kundakci, Şar, Kiziltan, Yargic, & Tutkun, 2014). Despite being recognized to have a dissociative origin long ago (Ellenberger, 1970), and included, for the first time, in the DSM-5 DID criteria as a cultural variant of identity disruption (American Psychiatric Association, 2013), experiences of possession can apparently occur within a wide range of 'normal' and 'pathological' conditions (Şar, Alioglu, & Akyüz, 2014).

Acute Dissociative Disorder with Psychotic Features

Acute dissociative reaction to stressful events with a less than one month duration has been introduced as one of the other specific dissociative disorders in DSM-5 (American Psychiatric Association, 2013). Although this category covers rather mild conditions resembling an adjustment disorder, the possibility of a psychotic form is mentioned in the text (p. 292). In fact, such conditions have been well known as reactive dissociative psychosis (Van der Hart, Witztum, & Friedman, 1993; Chapter 19 in this book) or formerly as 'hysterical psychosis' (Chapter 3 in this book).

Sudden onset and abrupt improvement, as well as the dramatic nature of the hallucinations (often visually hallucinated figures which are heard as well as seen) differentiate such dissociative episodes from psychotic disorders. Occasionally, amnesia for the episode may occur. The patient appears affectively labile, typically cycling rapidly through a wide range of inappropriate emotions. Due to rapid switching between mental states, the patient may exhibit extreme ambivalence, doing, and undoing some act in a psychotic or perseverative fashion (Putnam, 1989). Non-epileptic seizures and other sensorimotor (conversion) symptoms may also be present.

Acute dissociative psychosis may be superimposed on pre-existing DID (Tutkun et al., 1996). In a patient with DID where the host identity is in control most of the time (with the alter identities being suppressed), diagnosing the disorder may be very difficult. However, if a stressful event occurs, this equilibrium may disappear. This may reactivate many suppressed alter personalities as the host no longer has the 'mental energy' to stay dominant, and severe dissociative symptoms and flashbacks may cause a 'dissociative psychosis' (Şar & Öztürk, 2009).

Internal conflicts may also lead to a struggle for both control and influence between dissociative identities who have frightening, fearful, aggressive, or delusional features, and some of whom may have been long dormant. This condition has been called a 'revolving door' (Putnam, 1989) or 'co-consciousness' crisis (R. P. Kluft, personal communication, May 12, 1995). The former refers to rapid switching between dissociative identities because of a struggle for control, while the latter refers to a transient collapse of dissociative barriers. So, dissociative psychosis may be a 'diagnostic window' (Kluft, 1987) for DID; for some patients, their psychiatric symptomatology may be limited to dissociative crises throughout their lives.

Comorbidity between Psychotic and Dissociative Disorders

Despite constituting a single dimension of psychopathology qualitatively, dissociative disorders may have 'many faces' descriptively (Şar, 2014). Moreover, representing true comorbidity, these 'many faces' may coexist with almost any psychiatric disorder (Şar & Ross, 2006). As a pragmatic and categorical solution to this clinical diversity, dissociative subtypes now exist for PTSD (American Psychiatric Association, 2013) and have been proposed for schizophrenia (Ross, 2004) and for depression (Şar, 2011; Şar, Akyüz, Öztürk, & Alioglu, 2013).

In a recent study, we utilized cluster analysis to attempt to classify schizophrenia patients into groups on the basis of positive and negative symptoms (utilizing the PANSS; Andreasen, 1990) and general psychiatric comorbidity, along with dissociation (DES) and childhood trauma scores. There were two out of four subgroups which

demonstrated elevated scores on the childhood trauma and dissociation measures (Şar et al., 2010). In support of a 'dissociative subtype of the disorder' (Ross, 2004), these patients presented distinct characteristics.

First of all, every subgroup reported equally elevated scores on childhood emotional neglect. However, the two groups with elevated DES scores reported (besides elevated overall childhood trauma total scores) significantly higher childhood physical neglect compared to the non-dissociative patients. While there was no significant correlation between childhood trauma scores and the number of Schneiderian symptoms, there were more Schneiderian symptoms in the traumatized and dissociative subgroups than in the other groups. Interestingly, the two dissociative subgroups also differed in the types of childhood trauma histories and other measures of clinical phenomenology (Şar et al., 2010).Those with a history of childhood emotional abuse were characterized by high positive symptoms of schizophrenia and associated features of DID (including direct and indirect signs of amnestic episodes with or without fugue, intrusive memories, auditory hallucinations inside of the head, and feeling someone inside who takes control of oneself, predominantly). This subgroup appears to be closely related to DID. Finally, the high dissociative subgroup with a history of childhood sexual and physical abuse had both high positive and negative symptoms of schizophrenia and more lifetime and current general psychiatric comorbidity (i.e. somatoform, anxiety, mood disorders, or borderline personality disorder) than the former group (Şar et al., 2010). This subtype seemed to be a more fragmented and severe condition than the other characterized by broad general psychiatric symptomatology rather than direct resemblance to DID.

Clinical observations suggest that patients with elevated dissociation and symptoms of schizophrenia constitute a heterogeneous group. Beside those in the dissociative subtype of schizophrenia (who have clear cut schizophrenia despite the presence of dissociative symptoms), there are also patients who could be characterized as suffering from a 'schizo-dissociative' condition (Ross, 2004). These patients present with an almost equal mixture of dissociative and schizophrenia symptoms; i.e. they have better clinical insight and less disturbed affectivity compared to those with a clear-cut dissociative subtype of schizophrenia. It is possible that these two clinical patterns can be seen in the two subgroups of patients with high dissociation scores found in our cluster analysis study (Şar et al., 2010).

On the other hand, DID patients may also have psychotic personality states with features such as delusions or hallucinations (Coons, 1984). Psychotic features are observed when the relevant personality state has executive control episodically. On rare occasions psychosis may be also encapsulated in the host personality while other dissociative identities remain non-psychotic. In this case, psychotic symptoms may persist after integrative psychotherapy. Common examples of these symptoms are visual or auditory hallucinations, changed or deformed faces of familiar or unfamiliar persons, being poisoned by his/her family, or believing that he/she will be killed by his/her father. These anecdotal clinical observations have not yet been addressed in empirical studies.

An Interaction (Duality) Model

Significant diagnostic overlap between psychiatric disorders in epidemiological research may arise for several reasons. In addition to shared risk factors or fuzzy boundaries between diagnoses, one of the disorders may itself be a risk factor for another. Thus,

relations between dissociative and psychotic disorders can be conceptualized in diverse ways. One way is the continuity hypothesis. According to this hypothesis, a non-dissociative subtype of schizophrenia, a dissociative (subtype of) schizophrenia, schizo-dissociative disorder, and DID constitute a continuum (Ross, 2004). Though there is some evidence for such a clinical spectrum, we present an alternative hypothesis, namely an interaction (duality) model, to explain the complex comorbidity between two distinct but concurrent or subsequent disorders (i.e. an intersection of psychopathological spectra).

The duality model assumes that the interaction between the two psychopathologies may differ depending on whether dissociation is: (i) a defence against, (ii) a risk factor for, or (iii) a response to, a schizophrenic disorder. If considered a defence against the development of a schizophrenic disorder, the question remains whether this defence may prevent the progression of, or encapsulate, schizophrenic psychopathology for some subjects. On the other hand, there is evidence that childhood trauma (and possibly subsequent dissociation in the early years of life) may facilitate the emergence of a schizophrenic disorder subsequently (Morgan & Fisher, 2007). Alternatively, coping with the lifelong experience of having a chronic and devastating mental illness may require adaptive dissociative mechanisms, such as denial of the disorder, social detachment, mental absorption, change of perception of the self and the environment, or identity disturbances. A similar interaction model has been proposed for PTSD and severe mental illness (Spitzer, Vogel, Barnow, Freyberger, & Grabe, 2007). For example, a psychotic episode could itself be a cause of PTSD which may even lead to suicide attempts (Tarrier, Khan, Cather, & Picken, 2007). It is, however, too early to find evidence in support of one or another of these hypotheses (i.e. dissociation as risk, defence, or response).

The duality hypothesis has implications not only for research, but also for treatment. In cases in which both dissociative and psychotic pathology is suspected, treatment should take both aspects into consideration. An approach focused exclusively on either dissociative or psychotic disorders would be inappropriate. In our clinical experience, conditions in which dissociative disorder pathology predominates have a more favourable outcome. In contrast, in conditions with essentially 'equal' comorbidity or with predominantly schizophrenic psychopathology, the prognosis appears to be poorer. Pharmacological treatment should be shaped accordingly. In our clinical experience, dual psychopathology interferes with pharmacological treatment. However, this should be assessed through controlled clinical trials.

Conclusion

The relationship between dissociation and psychosis may be considered in three domains: (i) dissociative symptoms in psychotic disorders (Chapter 11), (ii) psychotic symptoms in dissociative disorders, and (iii) dissociative psychosis which is a dissociative disorder per se (Chapter 19). In this chapter, we have focused on psychotic symptoms in dissociative disorders. Nevertheless, a narrow symptom-oriented approach has limitations in psychiatric research (Mojtabai & Rieder, 1998). This can be seen, for example, by the number of studies which have found 'psychotic-like' or 'non-clinical' psychotic symptoms in the general population (or in persons described as 'non-patients'), but without screening for dissociative disorders (Lataster et al., 2006; Scott et al., 2008;

Verdoux & Van Os, 2002; Verdoux et al., 1998; Yung et al., 2006). Thus, both dissociative disorders and schizophrenia would be diagnosed most reliably with an approach that screens for the whole spectrum of psychopathology.

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13

Auditory Verbal Hallucinations

Prevalence, Phenomenology, and the Dissociation Hypothesis

Eleanor Longden, Andrew Moskowitz, Martin J. Dorahy, and Salvador Perona-Garcelán

Hearing voices that other people do not hear has long been considered a cardinal sign of madness; indeed, a television or movie scene of a man or woman, usually dishevelled, talking to themselves (presumably, responding to a voice) has for years been used as shorthand for the mental instability of a character. Thematic analyses of contemporary media have consistently found voice hearing to be depicted in association with chaotic and disturbed behaviour (Leudar & Thomas, 2000; Owen, 2012). In the renowned critique of psychiatric diagnosis, *On Being Sane in Insane Places*, Rosenhan (1973) demonstrated that claiming to hear a simple voice, with no other complaints, led to the hospitalization of eight healthy individuals.

For decades, hearing voices, or auditory verbal hallucinations (AVH) as they are technically known, were considered almost pathognomic for a diagnosis of schizophrenia. From the third through the fourth text-revised editions of the American Psychiatric Association's (APA) *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III, APA, 1980; DSM-IV-TR, APA, 2000), certain forms of voice hearing (voices commenting on one's behaviour or two or more voices conversing with each other) were the *only* symptom required to meet the symptom criterion for a diagnosis of schizophrenia. These manuals were in use for a third of a century. It was only with the publication of the DSM-5 in 2013 (APA, 2013) that the editors belatedly acknowledged the complete lack of evidence that these types of AVH were 'specific' to schizophrenia. They are still strongly emphasized, however, in the current edition of the International Classification of Diseases (ICD-10, WHO, 1992) and in the proposed criteria for schizophrenia in the ICD-11.

While it has long been recognized that not everyone who hears voices meets clinical criteria for schizophrenia or a psychotic disorder (Johns, Nazroo, Bebbington, & Kuipers, 2002), the standard argument has been that voices heard by those without psychosis – typically called 'pseudo' hallucinations – were different, in some fundamental way, from voices heard by persons with psychotic disorders. But as we shall see, the evidence for this argument is weak. On the whole, there is little to separate voices heard by persons in psychiatric institutions from voices heard by persons living a full life in the community, except for the person's relationship to their voices and others' willingness

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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to support and accept that experience. The realization of the many similarities in voice hearing across all clinical and non-clinical groups has led to a search for general factors underpinning this common phenomenon (Johns et al., 2014). One proposed possibility is 'dissociation' – a division of the personality, typically in response to trauma, which appears to strongly predict voice hearing in all populations.

The notion that voice hearing is essentially dissociative in nature was first proposed by Moskowitz and Corstens in 2007 (Moskowitz & Corstens, 2007). It was further elaborated by Longden and colleagues in 2012 (Longden, Madill, & Waterman, 2012). Since 2007, but particularly in the past few years, there has been an explosion of research confirming the central role of dissociation in the experience of hearing voices, and the associated frequency of trauma in the lives of persons who hear voices. Indeed, it can be argued that this domain of research provides the strongest bridge between the fields of psychotic, post-traumatic, and dissociative disorders. In this chapter, we will review the research, particularly focusing on publications since the previous reviews were conducted, supporting the argument that voice hearing (including that in the context of psychosis) is a dissociative phenomenon.

To establish the prevalence of voice hearing, we will begin with a brief review of population studies, followed by studies of voice hearing in various clinical and non-clinical groups. This review will form the basis for the argument that voice hearing is common, not inevitably associated with distress or psychiatric diagnosis, and broadly similar across all groups (though with some intriguing possible differences). Next, we will review the research linking dissociation to voice hearing, with particular emphasis on a series of important studies from Perona-Garcelán and his group. This will be followed by a discussion of the increasing emphasis on the relevance of a person's relationship to his or her voices, as opposed to any attempt to get rid of them, as the major focus of treatment.

Prevalence of Voice Hearing in Non-clinical Groups

Voice hearing is not only frequently associated with a wide range of non-psychotic mental health complaints, but is also present in persons in apparently good psychological health and with no history of psychiatric contact. Indeed, a range of studies have supported Esquirol's (1838/1965) early nineteenth century insistence that, while hallucinatory experiences might be most frequently the 'lot of feeble minds' it was also true that 'men remarkable for their … depth of reason and vigour of thought are not always free from this symptom' (p. 110). Prevalence estimates tend to be highly variable, most likely as a function of age group and definition of voice hearing used. For example, prevalence, broadly defined, is in the region of 40% in adolescents and young adults (Pearson et al., 2008; Posey & Losch, 1983–1984) compared to around 13% in the adult general population (Beavan, Read, & Cartwright, 2011). Given that the lifetime prevalence of clinically identified, functional psychosis ranges between 0.2% (narrowly defined criteria) and 0.7% (broadly defined; Kendler, Gallagher, Abelson, & Kessler, 1996), an implication of this research is that many more people experience voice hearing than receive treatment for psychosis. Indeed, several large-scale prevalence studies reported that only a minority of respondents (between one-third and one-fifth) had sought any kind of psychiatric assistance for their voices (see Longden et al., 2012; Moskowitz & Corstens, 2007).

Voice Phenomenology

The apparent paradox of a classic psychotic symptom being persistently found within different clinical and non-clinical groups has led some theorists to propose a dichotomy of 'true-hallucinations' (TH) and 'pseudo-hallucinations' (PH). Within this formulation, TH are believed to be typical of psychosis whereas PH are associated with trauma-spectrum conditions (e.g. dissociative disorders, post-traumatic stress disorder, borderline personality disorder [BPD]) or non-clinical but highly emotional experiences. However, such classification attempts have been largely unsuccessful, due to the inability to adequately distinguish between these groups on the basis of voice characteristics. Particular attention has focused on localization, with external voices (heard through the ears) considered a traditional hallmark of 'true' (psychotic) hallucinations, and internal voices (typically localized in the head) considered less psychotic. However, as reviewed by Moskowitz and Corstens (2007) and Longden et al. (2012), voice location is highly non-specific in terms of diagnostic or prognostic variables. Not only can the perceived location of voices change over time, there is no evidence that external voices are more reliably associated with schizophrenia than non-psychotic diagnoses. Correspondingly, researchers such as Copolov, Trauer, and Mackinnon (2004) have argued that the internal versus external distinction for AVH is 'non-significant' diagnostically and clinically. The American Psychiatric Association recognized this earlier, removing in the fourth edition of its Diagnostic and Statistical Manual (APA, 1994) comments that externally localized hallucinations were characteristic of schizophrenia.

Not only is the perceived location of voices uninformative with regard to diagnosis, 'outer' voices are not rated more subjectively 'real' than internal voices (Copolov et al., 2004; Junginger & Frame, 1985). Indeed, in this respect, Moskowitz and Corstens (2007) point out that while the concept of intact 'insight' is often employed as a criteria for PH, recognizing whether one's voices are internally generated is not an 'experienced characteristic' of voice hearing itself; rather it is part of a secondary appraisal made by the hearer (and as such is central to examine in terms of whether they develop 'secondary delusions' to explain the voices). The PH concept is compromised further when considering that variables such as 'controllability', 'mood incongruent content', and Schneiderian structure (where voices comment on the hearer or converse among themselves) also appear remarkably similar between different groups (see Longden et al., 2012; Moskowitz & Corstens, 2007). As such, the type of voices classically considered indicative of schizophrenia are actually just as likely to be endorsed by patients with non-psychotic, trauma-spectrum diagnoses and even, in some instances, by non-patients.

The failure of AVH to adequately and accurately inform differential diagnosis was strongly supported by a recent systematic review which compared hallucination phenomenology and prevalence in schizophrenia to a range of clinical and non-clinical populations (Waters & Fernyhough, 2016). No difference in AVH prevalence was found in the 18 studies which compared schizophrenia with other psychiatric diagnostic groups. Furthermore, of the 21 characteristics of auditory and visual hallucinations considered by Waters and Fernyhough, 20 (95%), including location, perceptual vividness, personification, duration, negative content, and the disruption caused by voices, were equally as common in schizophrenia and the other psychiatric conditions. The only exception was the age at which AVH began, with onset in late adolescence

appearing unique to schizophrenia and an earlier age of onset being more common among both the other patient groups and the non-clinical voice hearers. The authors concluded that AVH characteristics were not reliable for the purpose of differential diagnosis.

Auditory Hallucinations in Clinical and Non-clinical Groups: Similarities and Differences

Recent extensive reviews have been published on voice hearing in clinical and non-clinical groups (e.g. Daalman & Diederen, 2013; De Leede-Smith & Barkus, 2013; Johns et al., 2014; Larøi et al., 2012; Lawrence, Jones, & Cooper, 2010). The meaningful clinical and empirical differentiation of AVH between these populations rests on whether differences in their phenomenology and interpretation outweigh similarities, and the degree to which differences are deemed scientifically and therapeutically consequential. Thus, close scrutiny of unique and overlapping features is merited.

Similarities

Hill, Varese, Jackson, and Linden (2012) assessed 20 voice hearers diagnosed with schizophrenia, dissociative identity disorder (DID), or BPD, 20 non-clinical voice hearers, and 20 controls who had no experience of voice hearing. Participants were assessed with the Positive and Negative Symptom Scale (PANSS) for schizophrenia (Kay, Fiszbein, & Opfer, 1987), the auditory hallucinations component of the Psychotic Symptom Rating Scale (Haddock, McCarron, Tarrier, & Faragher, 1999) and the MetaCognitions Questionnaire (Wells & Cartwright-Hatton, 2004). The presence, frequency, and characteristics of AVH did not differ between the clinical and non-clinical voice-hearing groups. For example, the clinical and non-clinical voice-hearing groups were similar in terms of voice duration, loudness, and location, with the majority of participants in each group experiencing the voice as coming from outside of themselves. Similarly, Daalman et al. (2011) reported no difference on loudness, number of voices, and perceived location in 118 non-clinical and 111 clinical voice hearers, though the clinical sample had a longer duration once voices commenced. However, regardless of diagnostic status, voice content is generally targeted at the hearer rather than directed at something completely independent of them (Leudar, Thomas, McNally, & Glinski, 1997). Honig et al. (1998) found that clinical voice hearers reported voices commenting on their own thoughts and that of others more than their non-clinical group. Hill et al. (2012) showed no differences across groups in terms of whether the voices spoke from a first, second, or third person perspective. However, the schizophrenia sample of Honig et al. (1998) was more likely to report hearing voices in the third person than the non-clinical group.

The non-clinical group of Hill et al. (2012) reported lower experiences of other positive symptoms on the PANSS (e.g. delusions, disorganization). While many other studies have also shown reduced positive symptoms in non-clinical voice hearers (e.g. Chhabra, Badcock, & Maybery, 2013), Sommer, Derwort, Daalman, de Weijer, and Liddle (2010) reported a greater propensity for thought disorder in this group. In addition, Chhabra et al. (2013) found that non-clinical participants who experienced AVH

had higher scores on the Peters et al. Delusions Inventory (Peters, Joseph, & Garety, 1999) than participants who reported no hallucinations. In the same study, delusion scores were higher in a sample of participants with schizophrenia who experienced current AVH compared to a schizophrenia group with no current AVH.

In reviewing the literature on similarities and differences in AVH experienced by clinical (primarily psychosis) and non-clinical voice hearers, Daalman and Diederen (2013) concluded that the groups were similar in terms of the perceived location, loudness, and number of voices, as well as self-reported exposure to childhood traumatic experiences (see also De Leede-Smith & Barkus, 2013; Larøi et al., 2012; Lawrence et al., 2010). Intriguingly, both groups showed the same pattern of brain activation during hallucinatory experiences, with language areas being activated. With the considerable similarities between clinical and non-clinical voice hearing, Daalman and Diederen (2013) concluded that research on non-clinical voice hearers could be generalized to clinical voice hearers, with the advantage that the former group was free of confounds like medication, cognitive decline, distress, and comorbid symptoms.

Differences

While there are many similarities among clinical and non-clinical voice hearers, there are also some intriguing differences. For example, clinical voice hearers tend to report more male voices, while the non-clinical groups show no such gender bias (Badcock & Chhabra, 2013). Clinical groups are also more likely to hear voices constantly (Honig et al., 1998), whereas non-clinical voice hearers report voices starting at an earlier age than clinical voice hearers (Daalman et al., 2011; Honig et al., 1998).

Daalman et al. (2011) found their clinical participants had a greater frequency of voices, more distress, more negative content (e.g. abusive, commanding, insulting; Larøi et al., 2012), and less controllability (see also Honig et al., 1998). Negative emotional valence was particularly strongly associated with the clinical group. Lack of perceived control over the onset and offset of voices, along with their content, is one factor believed to heighten distress in patient voice hearers (Larøi et al., 2012). In addition, clinical participants report more malevolent, intrusive, omnipotent, and dominant voices than non-clinical participants, and feel more distant from their voices (i.e. more ego-dystonic; e.g. Sorrell, Hayward, & Meddings, 2010). The clinical group in the Hill et al. (2012) study reported more negative metacognitive beliefs about worry concerning danger and controllability and more negative beliefs about the need to control thoughts, of which the latter was related to heightened distress associated with hallucinations. Cognitive appraisals also underpin distress; interestingly, the *content* and *appraisal* of voices are somewhat independent, with, for example, positive voices sometimes being appraised with mistrust and malevolence (Badcock & Chhabra, 2013). Peters, Williams, Cooke, and Kuipers (2012) examined 46 clinical voice hearers and found that distress associated with AVH was not related to the characteristics of severity, frequency, or intensity, but was associated with the cognitive appraisal of how omnipotent and malevolent voices were believed to be (see also Sorrell et al., 2010). Regression analysis which entered both omnipotence and malevolence as predictors of voice-related distress found only omnipotence to be significant. These results support the importance of appraisals about voices in determining levels of distress; in contrast, in non-clinical groups, voices are typically appraised as benign and supportive (e.g. Hill & Linden, 2013).

There are also differences in the interpretation or attribution of identity to the voices. Leudar et al. (1997) assessed 14 voice hearers in treatment for schizophrenia and 14 from the non-clinical population, using in-depth interviews. More participants in the schizophrenia group associated famous people or supernatural entities with their voices than the non-clinical group. In contrast, for the non-clinical group, voices were more often interpreted as representing family members or themselves. Non-clinical participants were more likely to hear voices that suggested options for decisions or criticized directions taken, while the clinical group were more likely to hear voices commanding a specific action. God and the devil were more commonly attributed identities for voices in clinical voice hearers, while angels and guiding spirits were more commonly attributed identities for non-clinical participants (Badcock & Chhabra, 2013).

In summary, there seem to be considerable similarities in the phenomenology of voice hearing between clinical and non-clinical groups. Yet differences appear to be most evident, and arguably telling, in the interpretation of voices, with clinical groups perceiving them as more omnipotent, malicious, controlling, and aggravating than non-clinical groups.

Trauma and Dissociation

As indicated above, voice hearing is a much more uniform experience than had previously been supposed. How can such an experience be explained? It is our contention that one 'type' of voice hearing exists, which is most appropriately understood as a dissociative (rather than a psychotic) phenomenon, and that trauma, loss, or other psychosocial crises provide a catalyst for its development.[1] There is considerable evidence to support this position, based on a range of assessment and sampling procedures, clinical and non-clinical populations, and assorted research designs, showing that exposure to traumatic, victimizing events are frequently associated with hallucinations (e.g. Bentall, Wickham, Shevlin, & Varese, 2012; Goldstone, Farhall, & Ong, 2012; Longden, Sampson, & Read, 2016; Varese et al., 2012). In this respect, a major literature review into childhood trauma and schizophrenia (Read, Van Os, Morrison, & Ross, 2005) found three times as many studies documenting significant associations between abuse and AVH (particularly voices commenting and command hallucinations) than for any other psychotic symptom, leading the authors to suggest a potentially causal, dose–response relationship between childhood trauma and hearing voices. Available evidence suggests that this link is particularly pronounced for childhood sexual abuse, although other relevant variables include emotional and physical maltreatment, bullying, witnessing domestic violence, and being placed in institutional care (Longden et al., 2012). Other authors have refined these associations by suggesting that, while traumatic events may trigger voice hearing for many individuals (hence the high levels of exposure in different populations), it may be the psychological impact of the experience (and the extent to which it remains unresolved and un-integrated) that maintains voice hearing by negatively impacting on interpretation, representation, and emotional responses to one's voices (e.g. Andrew, Gray, & Snowden, 2008; Romme, Escher, Dillon, Corstens, & Morris, 2009; Chapter 24 of this book).

According to Van der Hart, Nijenhuis, and Steele's (2006) structural model of dissociation, trauma exposure may divide the personality into systems that are fixated on the

psychological impact of harmful events, along with systems focused on daily life and functioning. Within such a framework, voice hearing can therefore be conceived as disaggregated, 'disowned' representations of the self (or self-other relationships) that impede on functioning-focused parts of the personality, and are consequently experienced as an ego-dystonic event that appears cognitively and perceptually disconnected from autobiographical experience (see Dorahy & Palmer, 2015).

Empirical Evidence for the Role of Dissociation in Auditory Hallucinations

The high prevalence of voice hearing in those with trauma and dissociative disorders indicates the importance of dissociation in voice hearing (e.g. Dorahy & Palmer, 2015; Dorahy et al., 2009; Kluft, 1987; Laddis & Dell, 2012; Ross et al., 1990). A large number of studies have now reported robust, positive associations between the variable of dissociation and the experience of AVH, including in patients with a diagnosis of psychosis (e.g. Kilcommons & Morrison, 2005; Ross & Keyes, 2004; Spitzer, Haug, & Freyberger, 1997). In other research it has been found that people with psychosis who heard voices, or those with remitted hallucinations, both report more dissociative experiences (measured using the revised Dissociative Experiences Scale: DES-II, Carlson & Putnam, 1993) than either individuals with psychosis who have never experienced hallucinations or non-clinical controls (Perona-Garcelán et al., 2008). In addition, it has been demonstrated that individuals with AVH report significantly higher rates of depersonalization and absorption than psychotic patients with delusions only, non-clinical populations, and control groups with non-psychotic psychiatric conditions (Perona-Garcelán et al., 2008; Perona-Garcelán, García-Montes, et al., 2012).

Similar results have also been achieved in patients without a psychotic disorder who hear voices, or who score highly on measures of hallucination propensity. For example, Altman, Collins, and Mundy (1997) found that DES-II scores predicted AVH in a group of non-psychotic adolescent patients, even after controlling for schizotypal cognition and affective disturbance. Similarly, Morrison and Petersen (2003) reported that scores on the DES absorption subscale were a significant predictor of AVH among non-patients. In a correlational study of subjects with no psychiatric pathology, Glicksohn and Barrett (2003) employed the DES-II and TAS (Tellegen Absorption Scale; Tellegen & Atkinson, 1974) to demonstrate that AVH were associated with elevated levels of absorption and depersonalization/dissociative amnesia. Among other conclusions, these authors have suggested that absorption can be a factor associated with hallucinatory experiences. Perona-Garcelán et al. (2013) have likewise found that healthy subjects with a high predisposition for hallucinations exhibited significantly higher levels of absorption and depersonalization than subjects with a low predisposition. In turn, a more recent study by the same authors (Perona-Garcelán et al., 2016) assessed the relationship between hallucinations and dissociation (specifically, depersonalization and absorption) by comparing patients with psychosis and two non-clinical groups who were either prone or not prone to hallucinations. The results showed that the patients had higher levels of depersonalization, whereas the non-patients with hallucination proneness showed higher levels of absorption than both the patients with psychosis and the non-patient group without hallucination proneness. A multinomial logistic

regression analysis additionally showed that depersonalization increased the probability of belonging to the group of patients with psychosis and AVH while absorption increased the probability of belonging to the non-patient group prone to hallucinations. This in turn suggests that different dissociative variables may underlie the hallucinatory process in clinical and non-clinical populations, wherein levels of absorption could predispose for hallucinations while depersonalization (along with other mechanisms) influences the origins and/or maintenance of actual AVH by inducing greater distancing and detachment from mental events.

A few studies have also examined the relationships between childhood trauma, dissociation, and AVH. Varese, Barkus, and Bentall (2012) found that dissociation mediated between childhood trauma and hallucinations, an effect that was particularly robust for sexual abuse. Perona-Garcelán, Carrascoso-López, et al. (2012) also found a mediational role for dissociation between childhood trauma and voice hearing (but not between childhood trauma and delusions). However, the only dissociation variable to mediate this relationship was depersonalization. Similar results have been found in non-clinical populations, in which absorption and depersonalization mediate between traumatic childhood experiences and hallucination proneness in adulthood (Perona-Garcelán et al., 2014), and where dissociation has been shown to mediate the relationship between peer victimization and hallucinatory experiences in early adolescence (Yamasaki et al., 2016).

Voice Hearing as a Dialogical Experience

For the most part, psychological models of AVH have focused on understanding voices as a perceptual phenomenon or as an alteration of the normal mechanisms underlying perception (e.g. Bentall, 1990; Frith, Blackmore, & Wolpert, 2000; Morrison, Haddock, & Tarrier, 1995; Waters, Badcock, Michie, & Maybery, 2006; Waters et al., 2012). While recognizing the important contribution of these frameworks, they cannot adequately account for many aspects of the voice-hearing experience. This includes not only particular AVH characteristics (e.g. why voices are often heard in the second or third person, and the variety and complexity of hallucinated speech; see Dorahy & Palmer, 2015), but also a core aspect of AVH phenomenology: its interpersonal nature. Specifically, hearers generally report some kind of dynamic relationship with their voices (Romme et al., 2009) and voices, in turn, often appear to have distinct personalities, their own histories, and unique reactions in response to the hearer (Beavan, 2011). It is our contention that this important aspect of AVH phenomenology cannot be adequately explained using models based solely on cognitive biases or deficits, nor best understood only in perceptual terms. On the contrary, the fundamentals of voice hearing are that the person experiences some of their internal mental events as alien and disconnected from themselves ('not me'), which is reflective of multiple centres of consciousness.

An existing framework which may help understand this process is Hermans' theory of the dialogical self (Hermans, 2001). This theory posits that each person contain numerous 'self-positions' which have the capacity to communicate with one another in a process of internal dialogue. In dissociation terms, the 'self' of a voice hearer would be unintegrated, most probably due to early adverse experiences (e.g. trauma, losses, attachment disturbances), with the various positions or perspectives that make up the

self being autonomous and dissociated from one another (Perona-Garcelán, Pérez-Álvarez, García-Montes, & Cangas, 2015). This rationale leads us to argue that voices are dialogical experiences (Perona-Garcelán et al., 2015); that is, experiences with an intentionality which are contextualized within a unique personal history and socio-cultural circumstances. When referring to intentionality, experiences in which a person converses with the 'other' can be understood as originating within one's social environment or internal world, within which the hearer maintains consistent relationships. However, while research suggests that different 'self-positions' can exist in a harmonious and integrated manner (Puchalska-Wasyl, 2015), in voice hearers, the different aspects of the self are dissociated from one another, often experienced as seperate entities with distinct personality characteristics (Dorahy & Palmer, 2015). As such, we would expect to find that individuals who hear voices (in psychiatric populations as well as non-patient voice hearers) report a larger number of dissociative experiences relative to control groups. This conforms with the empirical findings previously reported.

A recent line of research supports the proposal that voices are dialogic experiences. Alderson-Day et al. (2014) studied the relationship between different types of speech and hallucination proneness among university students. They reported that the relationship between inner speech (assessed with the VISQ: Varieties of Inner Speech Questionnaire; McCarthy-Jones & Fernyhough, 2011) and hallucination proneness was not direct, but was rather mediated by dissociation. More specifically, the study found that two subscales of the VISQ, *Evaluative/Motivational Inner Speech* (i.e. giving oneself mental guidance) and *Other People in Inner Speech*, (i.e. the voices of people other than oneself within inner speech) showed a relationship with hallucination proneness that was partially mediated by dissociation. These findings were replicated by Perona-Garcelán, Bellido-Zanin, Senín-Calderón, López-Jiménez, and Rodríguez-Testal (2017). In addition, the authors adapted the VISQ by adding a new factor, measuring 'Dialogue With Self-Positions in Inner Speech', and found dissociation (absorption and depersonalization on the DES-II) to fully mediate between this factor and hallucination proneness.

In situating recent research data on AVH within this theoretical framework, it becomes possible to argue for a more parsimonious understanding of the voice-hearing experience than those which are commonly proposed in clinical and research contexts. Specifically, moving beyond the cognitive paradigm of the mind as a computer, mental processes can be understood as a product of social influences through which evolutionary processes (determined by culture) lead to internalized values, beliefs, and behavioural patterns from caregivers and other significant figures. In turn, this internalization of cultural patterns is expressed and represented in internal dialogic processes that embody the person's relationship with their environment. By extension, this concept invites an understanding of the self, not as a unitary or centralized entity that governs the life of the person, but rather as a dynamic, complex, and heterogeneous experience that is formed by biographical influences and which allows the interplay of different self-positions that have an adaptive role for the person. As such, this framework expands the view of AVH as merely hallucinations and perceptual aberrations, and instead focuses on states of consciousness reflecting different dissociated positions of the self; positions which, in the majority of cases, are experienced as subjectively real and in conflict with one another. We believe that this theoretical framework is compatible with the psychological research on AVH carried out to date, and adds a functional perspective that allows us to understand aspects of

AVH phenomenology that until now have been largely undervalued. This model resituates AVHs in the context of the alteration of self and, in turn, in the context of the alteration of I-in-the-world (adversities of life, being-in-the-world). And, perhaps most importantly, the model supports and justifies the clinical practice of conducting psychotherapeutic dialogues between hearer and voice (Corstens, Longden, & May, 2012; Pérez-Álvarez, García-Montes, Vallina-Fernández, Perona-Garcelán, & Cuevas-Yust, 2011; Stanghellini & Lysaker, 2007).

Discussion and Conclusion

Given the long association between psychosis/schizophrenia and putative cognitive and biogenetic deficits, it is unsurprising that so much clinical and conceptual research attention has been focused on this perspective on voice hearing. Yet there is considerable scope for moving beyond these parameters in ways that enrich both theory and therapy, acknowledging AVH 'as profound and complex as human consciousness itself' (Smith, 2007, book cover). This chapter demonstrates that hearing voices is not uniquely associated with any specific psychiatric pathology and cannot reasonably be reduced to an aberration of perception or a meaningless symptom of mental disease. On the contrary, a substantial body of theoretical and empirical work, including the accounts of voice hearers themselves, suggests that AVH are related to a person's life story and the various experiences that have shaped the formation and integration of their sense of self.

In view of this position, we suggest that dissociation emerges as a powerful explanatory tool for understanding the development and maintenance of AVH. A dissociation model can help to explain the well-documented association of AVH with trauma exposure, the dynamic interpersonal relationship between hearer and voice, and various phenomenological factors such as third person speech and the ways in which voices can manifest as highly personified with specific characteristics and emotional repertoires. As Stanghellini and Cutting (2003) note, voices indicate a lack of psychic integration, with inner speech manifesting as a distinct representation experienced as 'alien' and separate from oneself, or in their words, 'breaking the silence of inner dialogue' (p. 120). As such, framing AVH as a dialogical experience – self-positions imbued with intentionality and shaped by one's unique interpersonal circumstances – highlights the interaction between subjective mental experience and external social influence inherent to voice hearing in ways that purely cognitive models cannot adequately capture. In turn, understanding AVH as dissociative may partly help explain the apparent paradox of a paradigmatic symptom of psychosis being so prevalent in individuals with no history of psychiatric contact. Specifically, although dissociative processes are present in both patient and non-patient voice hearers, research suggests a clear continuum of severity, with intense self-focused attention on mental events being characteristic of non-clinical AVH and a process of distancing and detachment more typical among patient voice hearers. Correspondingly, one's subjective cultural and psychosocial context appears to be of great relevance in determining the subsequent emotional reaction – why some individuals develop distressing and disabling voices whereas others are able to live with their experiences in ways that are unproblematic or even, in some cases, positive and fulfilling (Romme et al., 2009).

These insights notwithstanding, Steel (2017) has also noted that while the relationship between AVH and adversity is increasingly acknowledged, 'a lack of theoretical development has restricted clinical development' (p. 3). Thus, while the empirical link between AVH and dissociation (most often operationalized using the DES-II, which has its limitations) is undoubtedly robust, there is still much to be clarified regarding the precise nature of the relationship. At the most basic level, this includes contention over what the term 'dissociation' actually refers to, and how different dissociative phenomenon (e.g. structural dissociation, depersonalization, derealization, absorption) can account for the aetiology of AVH in association with other cognitive and psychobiological processes. In turn, while there are strong grounds to propose that AVH do not manifest in significantly different ways between schizophrenia and the post-traumatic/dissociative disorders (Moskowitz, Mosquera, & Longden, 2017), it is not clear how, if at all, dissociation may differentially relate to proposed phenomenological subtypes of AVH (commanding and commenting, memory based, own thoughts/inner speech, nonverbal; McCarthy-Jones et al., 2014). Similarly, while a dissociation model has much to offer in supporting distressed voice hearers, working with traumatic representations via AVH in psychosis populations – with, for example, techniques like dialoguing – is an area that currently lacks full theoretical understanding (Steel, 2017), with limited evaluation of efficacy. Clearly there are many avenues to be explored in order to continue advancing this important clinical and research agenda. However, we would argue that viewing AVH as a normal variation of human experience, most usefully understood as dissociative in nature, is an important starting point for re-situating voice hearing within a framework that does greater justice to its complexity than previous paradigms have allowed for.

Note

1 While voice hearing is commonly reported as part of spiritual/cultural experiences and practice, it is not yet apparent whether such experiences can be better accounted for by mechanisms other than the dissociative, stress-based ones considered here. In any case, such considerations are beyond the scope of this chapter.

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14

The Value of Hypnotizability in Differentiating Dissociative from Psychotic Disorders

Joost B. C. Mertens and Eric Vermetten

Hypnotic susceptibility is a fascinating phenomenon that has entranced and puzzled clinicians and researchers for decades. Hypnotizability, or hypnotic susceptibility, can best be viewed as a disposition, only manifested under certain conditions, in the same way that water vaporizes only when heated and wood is flammable only when it is dry and close to a fire. The hypnotic ability may become manifest not only during formal hypnotic induction procedures, but also in the context of environmental challenges such as psychological trauma. Particularly in the 1960s and 1970s, considerable research was conducted on hypnotizability, focused on assessment and clinical usefulness, and links to suggestibility and other personality characteristics were proposed (see Barber & Glass, 1962; Frankel, Apfel-Savitz, Nemiah, & Sifneos, 1977). For some individuals, hypnotizability appears to have some advantages, for example by enabling an escape from certain mental states of awareness and blocking pain, humiliation, or physical discomfort (Spiegel & Vermetten, 1994). While this may provide the appearance of emotional control over the arousing impact of life-threatening stress, it can also lead to negative effects over time. When such an individual is reminded of the trauma later on, dissociative symptoms of numbing, amnesia, hyperarousal, flashbacks, and nightmares may arise.

As is discussed in other chapters of this book, it can be difficult to differentiate schizophrenia from trauma disorders because there are often overlapping symptoms (Vermetten, Lanius, & Bremner, 2008). The older studies that had suggested that hypnotizability (which some see as a diathesis or predisposition for the development of dissociative disorders; Butler, Duran, Jasiukaitis, Koopman, & Spiegel, 1996; Dell, 2016) may aid in differentiating patients with trauma-related dissociative symptomatology from schizophrenia have, unfortunately, largely been forgotten. Consequently, these findings are not included in more recent studies of complex clinical cases. Failure to acknowledge and learn from these findings might be due to many reasons, not least of which is that hypnosis studies are not typically part of the curricula for schools of psychology and medicine. As a consequence, there are few clinicians or researchers who are capable of using hypnotizability to aid in the assessment of schizophrenia and dissociative disorders. Because of this, many relevant assessment instruments have not been updated. While current research has deepened our

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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understanding of the nature of hypnosis (Jiang, White, Greicius, Waelde, & Spiegel, 2016; Vanhaudenhuyse, Laureys, & Faymonville, 2014), an update of the way hypnotizability is assessed is clearly called for.

This chapter reviews the current concepts of hypnosis and hypnotizability and reviews research using hypnotizability as a diagnostic tool to help differentiate between psychotic patients with schizophrenia and those with trauma-related dissociative disorders.

Hypnosis as an Outcome

For a proper understanding of the role of hypnotizability in differentiating psychotic from dissociative disorders, it is important to understand the nature of the phenomenon more clearly. In our current understanding, hypnosis is both a procedure and a phenomenon or outcome of that procedure. This two-fold aspect of the term hypnosis is important, because the definition of the procedure will influence the outcome, and thus both elements should be discussed in research methodology (Nash & Barnier, 2008).

The word 'hypnosis' – from the Greek *hypnos*, meaning 'to sleep' – was first proposed by the Scottish surgeon James Braid (1795–1860), who was fascinated with Mesmerism and used it for anaesthesia in surgery (Hammond, 2013). However, hypnosis in therapy has little to do with sleep. Rather, it is characterized by focused attention (i.e. *absorption*), heightened *suggestibility*, and *dissociation*. Although hypnosis was used in medical practice from the start of formal medical training in the eighteenth century, and thus can be considered the oldest Western form of psychotherapy, its application and use in modern psychology and psychiatry has varied considerably over time. There were periods when hypnosis was overvalued, and other times when it was undervalued or ignored, despite empirical evidence for its usefulness with different mental health problems and disorders.

The section of the American Psychological Association that deals with hypnosis (Division 30, Society of Psychological Hypnosis) has recently agreed on a definition in which the distinction between hypnotic procedures and hypnosis as an outcome is emphasized (Elkins, Barabasz, Council, & Spiegel, 2015). In this definition, hypnotic *induction* is described as a procedure designed to induce hypnosis. In contrast, *hypnosis* is defined as 'a state of consciousness involving focused attention and reduced peripheral awareness characterized by an enhanced capacity for response to suggestion', while *hypnotizability* is defined as 'an individual's ability to experience suggested alterations in physiology, sensations, emotions, thoughts, or behavior during hypnosis' (Elkins et al., 2015, p. 6). Hypnosis as an outcome, the hypnotic *state*, is a natural phenomenon, occurring spontaneously and involuntarily. Hypnosis can be seen as a state of consciousness with focused attention involving focal concentration and inner absorption with a relative suspension of peripheral awareness and critical self-judgment. Three key factors, or components, of this state have been identified (Spiegel & Greenleaf, 2005; Spiegel & Spiegel, 1978):

- *absorption*: a tendency to become deeply or intensely involved in a perceptual, imaginative, or ideational experience;

- *suggestibility*: responsiveness to social cues, leading to an enhanced tendency to comply with hypnotic instructions, representing a suspension of critical judgment;
- *dissociation*: mental separation of components of experience that would ordinarily be integrated.

Questions have arisen as to how the factors of absorption, dissociation, and suggestibility relate to each other and to the overarching concept of hypnosis; a wealth of research has addressed how well these concepts can be differentiated within the hypnotized subject, and whether these factors should be taken into account in current measurement scales. For example, are the factors absorption, suggestion, or dissociation different depending on whether they are considered *within* or *outside of* the hypnotic context? The literature on these relationships is complex and discussed elsewhere (e.g. Nash & Barnier, 2008), but aspects that are important for this chapter will be briefly reviewed.

The relation of hypnosis to absorption appears to be highly influenced by context; if absorption is measured outside of the context of hypnotic induction, the correlation is small (see Milling, Kirsch, & Burgess, 2000). Yet absorption does correlate with a subtype of hypnotic suggestion, namely high level (cognitive) suggestions, such as a suggestion to perceive something visible (seeing something that is not present), or hypnotic negative hallucinations (not seeing something that is present; Balthazard & Woody, 1992). If one focuses on measuring absorption as one aspect of hypnotizability, it can also be useful as a predictor of the susceptibility for more specific hypnotic items (low level or high level). A neurophenomenological explanation might be found in the fact that attention, if combined with suggestion, modulates neural activity for visual stimuli, involving altered functional connectivity in the dorsolateral prefrontal cortex and dorsal anterior cingulate cortex (dACC; Hoeft et al., 2012).

As with hypnosis, *suggestion* and *suggestibility* have been defined and conceptualized in many different ways. Suggestibility is not a unified construct; there are different forms of suggestibility, including being more suggestible for imaginary storytelling, for physical sensations, or for placebo effects (Oakley & Halligan, 2009; Raz, 2007). Also, the person's response to a suggestion depends on many factors, including the type of suggestion and contextual factors such as the individual's attention and personality and the relationship between the hypnotist and the person. The critical question is: does hypnosis change the degree of suggestibility? This is seldom measured properly. Authors such as Kirsch (1997) argued that there is little difference between hypnotic and non-hypnotic responsiveness to suggestions and concluded that hypnosis is not a specific state of mind, but is just synonymous with imaginary suggestibility. However, Santarcangelo et al. (2010) tested the effects of suggestion on body sway with eyes closed, in high and low hypnotizable subjects, under two conditions – after hypnotic induction and without hypnotic induction. They showed that, without hypnotic induction, only highly hypnotizable subjects changed the plane of body sway according to the (suggested) imagined head rotation. The authors concluded that, even outside of the context of hypnosis, highly hypnotizable participants showed a different reaction to a suggestion compared to 'lows' but, with hypnotic induction, the suggestibility of 'lows' can be increased. Furthermore, the perceived involuntariness reported by 'highs' could be measured physiologically in addition to being subjectively experienced (Santarcangelo, 2014; Santarcangelo et al., 2010). This elegantly suggests that hypnosis and suggestibility are related constructs, but are not identical.

Finally, the literature on the relation between *dissociation* and hypnosis traditionally acknowledges the contribution of the work of Pierre Janet (Van der Hart & Dorahy, 2006). In 1920, Janet described the 'désaggrégation mentale', the splitting off of certain mental states, especially in relation to psychological conflict or trauma. Janet felt that the core problem in trauma was a difficulty in integration rather than a proliferation of components of consciousness, memory, identity, or perception. While normally all sensations are experienced and cognitively bound together, in dissociation mental contents are separated from other components (Janet, 1889, 1920). Hilgard elaborated on this in his neo-dissociation theory of hypnosis (Hilgard, 1977). He argued that, in hypnosis, a part of the mind can enter an altered state of consciousness, but a dissociated part of the mind, designated as the 'hidden observer', will remain aware of what is going on. Two parallel operating systems of cognitive control of consciousness can be recognized, with monitoring and executive functions, which can operate somewhat independently. In hypnosis, the system alters in several ways: first, in changes in the functions of planning and initiative; second, in changes in communication between monitoring and control processes, and third, hypnosis disturbs the 'balance' between monitoring and executive control functions, which is an explanation for the perceived involuntariness of the imagined action. Hilgard's theory has been criticized on several counts, among which is the fact that the hidden observer phenomenon is relatively rare and seems related to the type of instructions given (for a review, see Woody & Sadler, 1998, 2008). When studied separately, dissociative ability is only modestly related to hypnotizability (Faith & Ray, 1994). Like *absorption* and *suggestibility*, *dissociation* is not a unitary construct; there are a plurality of dissociative mechanisms and confounding factors, such as awareness, control, and volition (Vermetten, Bremner, & Spiegel, 2002).

Although the literature summarized above demonstrates that hypnosis is associated with absorption, suggestibility, and dissociation, it also shows that hypnosis is more than these factors taken in isolation. If we look into the phenomenology and neurophysiology of the hypnotic state, we may perceive a better understanding of these intricate relationships.

The Neurophenomenology of the Hypnotic State

Hypnosis as a state, especially *deep trance*, is accompanied by certain classic phenomena: catalepsy, ideomotor phenomena (such as automatic writing), post-hypnotic effects with amnesia for the event, hypermnesia, age regression, and hallucinatory phenomena. There is compelling evidence that robust psychological and physiological phenomena underlie hypnosis (Barber, 2000; Faymonville, Boly, & Laureys, 2006; Rainville & Price, 2003; Vanhaudenhuyse et al., 2014). Changes in neural activity underlie the focused attention, enhanced somatic and emotional control, and lack of self-consciousness that characterizes hypnosis. Changes in relaxation, focus, and absorption, induced by standard hypnotic procedures, are associated with changes in brain activity within different brain areas. There is growing evidence of the involvement of areas modulating self-related and external brain networks (Vanhaudenhuyse et al., 2014). One network involves midline brain structures such as the precuneus and the rostral ACC (e.g. Hoeft et al., 2012), often referred to as the 'default mode network' or DMN (which is thought to involve self-referential processing; McGeown, Mazzoni, Venneri, &

Kirsch, 2009). A second proposed network involves lateral fronto-parietal regions, associated with attention-demanding tasks and the cognitive processing of external sensory input. When individuals who are high and low in hypnotizability are compared using a resting state fMRI task, high hypnotizables show an increased connectivity of the left anterior aspects of the dorsolateral prefrontal cortex (DLPFC) and the dorsal anterior cingulate cortex (dACC; nodes of the so-called *salience network*, or SN), and decreased DMN activity (McGeown et al., 2009). Important recent research with fMRI in high versus low hypnotizable subjects found shifts of activity in the three major networks of the brain; executive control network (ECN, engaged during cognitive tasks that require externally-directed attention), SN (contributing to complex brain functions such as self-awareness through integration of sensory, emotional, and cognitive information), and DMN (active in the absence of most external task demands; Jiang et al., 2016). High hypnotizability was associated with reduced activity in the dACC, increased functional connectivity ('coupling') between the dorsolateral prefrontal cortex (DLPFC) of the ECN and the insula in the SN, and reduced connectivity ('decoupling') between the ECN (DLPFC) and the DMN (posterior cingulate cortex, PCC). These changes in neural activity suggest that what characterizes hypnosis is:

- focused attention, less vigilance about alternative foci of attention, a change in cognitive processing of external sensory input;
- dissociation of somatic experience and emotional control, the ability to engage in tasks with reduced anxiety about possible alternatives;
- detachment from internal mental processes such as mind wandering and self-reflection and reduced self-awareness.

This research also suggests that the hypnotic state in high hypnotizable individuals is a product of reduced contextual vigilance and disconnection from default mode resting activity, along with intense inner focus and somatic awareness.

In brief, in hypnosis and hypnotizability, elements of absorption (attention), suggestibility, and dissociation are all represented. But hypnosis is a distinct state, accompanied by measurable changes in physiology and brain activity. Although in the hypnotic state, heightened absorption (attention), suggestibility, and dissociation are often present, these elements should not be considered identical to hypnotizability or to each other; they derive from different functional neurobehavioural systems and can be differentiated (e.g. low hypnotizable patients can be highly suggestible and vice versa).

Hypnotizability Assessment

The apparent confusion between the concepts of hypnotizability and suggestibility is reflected in the development of different rating scales. There are many informal tests and more than 25 formal scales for the assessment of hypnotic susceptibility (see Perry, Nadon, & Button, 1992, for a classic review of hypnotizability tests and Barnier & Council, 2010 and Woody & Sadler, 2008, for more recent ones). The result of these studies is that, independent of the assessment method used, all studies show that hypnotizability is a measurable trait which shows a normal distribution in the general population. Empirical studies of the relationship between hypnotizability and psychopathology have supported the idea that most psychiatric diagnoses have medium to low

hypnotizability (see Spinhoven, Van Dijck, Hoogduin, & Schaap, 1991), congruent with the argument that hypnotizability is a normal human trait (see Kihlstrom, 1979). Although hypnotizability is considered to be variable across individuals, it is stable within individuals, with a test–retest correlation of 0.60 over periods of 10–25 years, despite training and previous exposure effects (Hilgard, 1965; Piccione, Hilgard, & Zimbardo, 1989). Those who are low on hypnotizability are typically unable to enter a hypnotic state, while those who are high in this trait do so very easily (Spiegel & Spiegel, 2004). Hypnotizability appears to peak between the ages of 6 and 10 and then begins a gradual decline with greater age (Morgan, Johnson, & Hilgard, 1974). Approximately 10–15% of the population are highly susceptible to hypnosis, 10–15% are unresponsive, and the remaining 70–80% are moderately susceptible (Perry, 1992).

One of the most rigorously developed and tested hypnotizability tests, the Stanford Hypnotic Susceptibility Scale (SHSS, Forms A and B), was first introduced in 1959. The A and B forms were later supplanted by Form C in 1962, which is still considered to be the 'gold standard' (Barabasz & Barabasz, 1992; Barabasz & Watkins, 2005). This scale includes comprehensive pre-test instructions, with fully scripted instructions for each of 12 items (e.g. arm rigidity). It takes approximately 60 minutes on an individual basis to administer the scale. The scale is behaviourally oriented; scores of 0 or 1 on each item are given for the subject's observable responses rather than their subjective experiences. To date, the scale has not been revised or updated so some of the tasks and instructions are a little archaic (e.g. hallucination of a mosquito).

Because researchers and clinicians felt the need for a more user-friendly and comprehensive test, the Harvard Group Scale of Hypnotic Susceptibility (HGSHS, Shor & Orne, 1962) was developed. Two other scales were developed that matched the need for routine clinical use, i.e. the Stanford Hypnotic Clinical Scale (SHCS, Weitzenhoffer & Hilgard, 1963) and the Hypnotic Induction Profile (HIP). The HIP, originally developed by Herbert Spiegel, was designed for routine clinical purposes as well as for research (Spiegel, 1972, 1977), and differed from susceptibility scales in that it could be administered rapidly, typically in 5–10 minutes. It is an assessment of hypnotizability in which a systematized sequence of instructions, responses, and observations tap hypnosis as a subtle perceptual alteration; it enquires about the subjective experience of dissociation and involuntariness. The HIP has two main scores, the induction score (IND), with items similar in structure to the SHSS and HGSHS, and a separate feature known as the 'Eye Roll phenomenon' or 'Eye Roll Score' (ERS). The IND is comprised of *dissociation*, *challenged arm levitation*, *sense of involuntariness*, *response to a cut-off signal*, and *sensory alteration* (2 points each, giving a range of 0 to 10). The ERS score represents the degree to which subjects can roll their eyes upward and keep them in that position while closing their eyelids, and is measured on a scale of 0 to 4. It is considered to measure the innate trance capacity rather than responsiveness (Spiegel, 2007). To some, the ERS is considered to be as good as the SHSS and HGSHS as an indicator of hypnotizability (Frischholz, Spiegel, Trentalange, & Spiegel, 1987), but this claim has been contested (e.g. Hilgard, 1982), and recent research shows that the ERS does not significantly correlate with either the SHCS or the HIP Induction score (Gritzalis, Oster, & Frischholz, 2009).

These tests all regard hypnosis as a state; researchers who hold a non-state view of hypnosis (and consider hypnotizability as synonymous with suggestibility) have developed alternate tests with fewer items. Examples of these are the Barber Suggestibility

Scale (BSS, Barber & Calverley, 1964) and the Carleton University Responsiveness to Suggestion Scale (CURSS, Barber & Glass, 1962; Spanos et al., 1983). The BSS does not depend on the induction of a standardized hypnotic state, and its instructions make no mention of the word 'hypnosis'. The procedure is, however, analogous to the SHSS, and contains eight items (including *arm lowering*, *hallucination of thirst*, and *body immobility*). Subjects receive both objective and subjective scores on this scale, each with a maximum score of 8.

While scores on the HIP (HIP-IND) and SHCS are significantly correlated ($r(22) = 0.41$, $p < 0.01$; Gritzalis et al., 2009), several decades of research suggest that the intercorrelations are not high enough to consider them to be interchangeable measures. It is thought that the differences reveal that hypnosis is not one-dimensional (hypnotic susceptibility measured by levels of performance), but encompasses two or more dimensions (e.g. level of conscious absorption and level of suggestibility), which are somewhat independent (Balthazard, 1993; Kirsch, 1997; Lifshitz, Cusumano, & Raz, 2013; Raz, 2007). There are also other problems with these instruments. For instance, the SHSS has a tendency to reward or discourage subjects during testing; if the first items are performed successfully or unsuccessfully, this will implicitly influence the rate of success on the next items.

The recently developed Elkins Hypnotizability Scale (EHS) may overcome some of these issues and was designed to meet the needs of modern hypnosis researchers and clinical practice. Reliability, validity, and normative data were explored by subjecting 230 non-clinical participants to the EHS and Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C). The EHS demonstrated adequate internal consistency ($\alpha = 0.78$) and good discriminating ability; scores of the two scales were highly correlated ($\rho = 0.86$; Kekecs, Bowers, Johnson, Kendrick, & Elkins, 2016). The EHS has yet to be used in clinical studies but is clearly promising.

Hypnotizability and Differential Diagnoses in Psychiatry

One of the first to systematically assess hypnotizability was the Dutch psychiatrist Hans Breukink (1860–1928; Van der Hart & Spiegel, 1993). His work was recognized late last century by another Dutch pioneer in hypnosis, Onno van der Hart. Breukink worked in Utrecht and was very influential in the years after the First World War. In Breukink's early diagnostic system and treatment strategies, the extent of hypnotizability played a major role. Breukink viewed hypnotizable psychotic patients as not being schizophrenic but as suffering from hysterical psychosis, which he thought had important implications for treatment: 'When a psychotic patient can be hypnotized, the patient can be cured' (Breukink, cited in Van der Hart & Spiegel, 1993, p. 193; Chapter 3 of this book). He was convinced that the determination of hypnotic capacity was clinically useful in differentiating psychotic patients with dissociative symptomatology from those with schizophrenia. For hysterical psychosis, therapy using hypnosis was typically the first choice of treatment. He assessed a patient's hypnotic capacity by their responsiveness to simple induction techniques, such as arm levitation or suggestions to block pain. He utilized hypnosis with patients in a number of different ways: as a symptom-oriented treatment procedure, to induce comfortable and supportive mental states, and as a way to uncover and integrate traumatic memories. However, to him this emotional

expression approach was unsuitable and potentially dangerous in low hypnotizable patients or in patients with schizophrenia. The work of Breukink constituted the beginning of a recognition of the clinical importance of differentiating hysterical and trauma-related forms of psychosis from schizophrenia and related psychotic disorders (Spiegel & Fink, 1979). We will refer to the former group as 'trauma spectrum disorders', incorporating patients with post-traumatic stress disorder, dissociative disorders, and borderline personality disorders (Bremner & Brett, 1997).

A landmark study from Frischholz, Lipman, Braun, and Sachs (1992) supported Breukink's ideas. He and his group demonstrated that patients with dissociative disorders appeared to be significantly more hypnotizable than patients with schizophrenia or other mental disorders, and persons with no psychiatric diagnosis at all (Frischholz et al., 1992). This was consistent with the traditional position that patients with schizophrenia were poorly hypnotizable.

To examine this body of work, we performed a review of contemporary research studies in this domain. A search of PUBMED and PSYLINK databases revealed 17 studies assessing hypnotizability in patients with schizophrenia. Only six were consistent with the standard position (i.e. persons with schizophrenia demonstrate low hypnotizability), while eight studies reported normal or even increased hypnotizability; the other three were inconclusive. A careful review demonstrated that most of these studies had methodological limitations, such as a lack of control group, poor or no clear diagnostic criteria for psychotic disorders, lack of screening for dissociative disorders, or lack of consideration of variables that might moderate hypnotizability (Pettinati, 1982). Some of the studies used the *Davis and Husband Hypnotic Susceptibility Scale* (DHHSS, Davis & Husband, 1931), or the *body sway test* (Gheorghiu, 1971); both have been criticized for their inadequate properties (including no standardized instruction or scoring criteria). Several studies have unequivocally demonstrated high hypnotizability in dissociative disorder patients, most clearly the studies by Frischholz et al. (1992) and Dale, Berg, Elden, Ødegård, and Holte (2009). Others have demonstrated high hypnotizability in PTSD (Spiegel, Hunt, & Dondershine, 1988), acute stress disorder (Bryant, Guthrie, & Moulds, 2001), and bulimia nervosa (Covino, Jimerson, Wolfe, Franko, & Frankel, 1994). We will review these studies below.

Early Studies (1936–1973)

When considering the earliest schizophrenia studies, the results require some explanation. First of all, four of the older studies, which found schizophrenia patients to be highly hypnotizable (Friedman & Keup, 1963; Gale & Herman, 1956; Heath, Hoaken, & Sainz, 1960; Wilson, Cormen, & Cole, 1949), failed to clearly operationalize hypnosis and hypnotizability. In those studies, a standardized written text with suggestions was used, and stages of hypnosis were scored with the DHHSS, a kind of rating scale, ranging from 'insusceptible' to 'deep trance' (defined as a state with symptoms like positive hallucinations and amnesias). Friedman and Keup (1963) used a 'rapid Braid technique' (an instruction to go to sleep, not further specified) and also used the 'Davis test' for scoring. None of these studies used diagnostic criteria for schizophrenia or a control group.

Kramer and Brennan (1964) used the newly developed SHSS in 25 female patients with schizophrenia. They found most patients to be hypnotizable, with an average score of 7.64, higher than the average score of a student sample; they concluded that the group

of schizophrenic patients were 'more hypnotizable than are Stanford undergraduates' (p. 568). Other studies replicated these findings (Kramer, 1966; Polak, Mountain, & Emde, 1964; Webb & Nesmith, 1964). However, as in the studies reviewed above, no diagnostic criteria were specified for schizophrenia. In addition, as most participants in these studies were chronic inpatients, they may have been highly cooperative with these procedures, which were often administered by their treating physician, who had considerable power over them. High levels of compliance or cooperation could be easily confused with suggestibility and (mis)interpreted as high hypnotizability.

A study by Barber and colleagues produced different findings (Barber, Karacan, & Calverley, 1964). They noted that a substantial portion of their schizophrenia patients were not testable, because they would either 'not relate to the experimenter, or would not listen to the instructions, or seemed to be unable to understand the instructions' (Barber et al., 1964, p. 440). They found that, among females who could be tested, the majority were not susceptible for hypnosis; 32% were somewhat hypnotizable, but only 5% could be rated as 'highly suggestible'. For males these scores were even lower, 21 and 2%, respectively. The authors concluded '[i]f the term "hypnotized" is to be used operationally to denote enhanced response to test-suggestions of body rigidity, sensory "hallucination", selective amnesia, and so on, produced by a procedure of the type traditionally labeled as a "hypnotic induction", the results of this experiment strongly indicate that it is difficult to hypnotize chronic schizophrenic patients' (Barber et al., 1964, p. 448).

Recent Studies (1976–1992)

The confounding variables of age, education, duration of treatment, and cooperativeness were addressed in one of the more recent studies (Ham, Spanos, & Barber, 1976). Cooperativeness during the testing session was assessed on the basis of the degree to which the subject complied with two requests (a tapping task – tapping a pencil on the desk until being told to stop – and keeping one's eyes closed). Cooperativeness, together with education, correlated positively with suggestibility scores on the Barber Suggestibility Scale. The authors concluded that, in schizophrenia, 'the subject's willingness to cooperate in carrying out the aims of the suggestion is an important precondition for hypnotic performance' (Ham et al., 1976, p. 555).

In another study assessing hypnotizability instead of suggestibility, the hypnotic responsivity of 115 chronically ill psychiatric patients, diagnosed with the Feighner Criteria (a precursor to the DSM III), and 83 non-clinical controls was investigated with use of the HIP (Spiegel, Detrick, & Frischholz, 1982). This study also used examiners who were blind to diagnosis and good interrater reliability was demonstrated. The normal control group showed a mean HIP score of 7.3 and the 23 patients with a 'thought disorder' (18 schizophrenia, 4 schizoaffective disorder, and 1 'paranoid state') scored the lowest (3.99), which was a highly significant difference ($p < 0.0005$). The other groups scored as follows: generalized anxiety ($n = 18$, 4.06), affective disorder ($n = 56$, 5.76), and miscellaneous disorders ($n = 18$, 5.96).

In a follow-up study, also utilizing the HIP, the hypnotizability of 65 American Vietnam Veterans with PTSD was compared with a non-clinical control group of volunteers ($n = 83$) and the different groups of in and outpatients described in the aforementioned study (Spiegel et al., 1988). The PTSD patients showed significantly higher scores on the HIP (8.04) than all other groups, and patients with schizophrenia had the lowest scores

(3.99, significantly different at $p = 0.001$). The strengths of this study included the use of DSM-III diagnostic criteria, independent examiners, and a formal consent procedure.

This finding was replicated in a study with 113 psychiatric patients and 58 normal controls (Pettinati et al., 1990). In this study, hypnotizability was tested using both the HIP and the SHSS. Examiners were independent and blind to diagnostic status. The psychiatric inpatients consisted of persons with schizophrenic disorders ($n = 28$), major depression ($n = 20$), substance use disorders ($n = 23$), and eating disorders ($n = 42$). On average, compared to controls, all patients showed significantly lower scores on the HIP and SHSS. On both the HIP and SHSS, schizophrenia patients showed significantly lower scores compared to all but one of the other patient groups (HIP: 4.98, SSHS: 5.83). The 19 anorexia patients in the eating disorder group scored even lower (HIP: 4.23, SSHS: 4.92; compared to the control group, HIP 6.51 ($p < 0.001$) and SHSS 6.08, ($p < 0.01$); Pettinati et al., 1990). The authors suggested that the low scores of the anorexia patients could be attributed to comorbid obsessive or compulsive personality disorders, common in this disorder, which typically demonstrate low hypnotizability.

Finally, the most recent study, which was the only one to directly compare schizophrenic and dissociative disorder patients, has produced perhaps the clearest findings (Frischholz et al., 1992). In this study, five groups were compared on hypnotizability, using both the HIP and the SHSS form C. The clinical groups included patients with schizophrenia ($n = 13$), dissociative disorders ($n = 17$), affective disorders ($n = 13$), and anxiety disorders ($n = 14$). There was also a non-clinical group of 63 university students. Diagnoses were independently determined through DSM-III criteria and hypnotizability assessments were conducted after written consent by independent examiners blind to diagnostic status. The results indicated a significant main effect for clinical diagnosis ($p < 0.01$). Comparing HIP scores with SHSS scores, patients with schizophrenia scored significantly lower than normal subjects on the HIP (3.73 vs. 6.59), but not on the SHSS (5.69 vs. 6.16), and dissociative disorders showed significantly higher mean HIP scores (8.05 vs. 3.73) and SHSS scores (8.94 vs. 5.69) than patients with schizophrenia. Also, compared with normal subjects, patients with schizophrenia showed more significant differences on the HIP (3.73 vs. 6.59) then on the SHSS (5.69 vs. 6.16). They had significantly lower mean eye roll scores and induction scores than normal subjects. On average the eye roll score correlated lower with other measures of hypnotizability. Although the authors concluded that the eye roll test probably does measure the same thing as the other measures of hypnotizability, the results do not seem to fully support this conclusion. The differences between ERS, HIP, and SHSS scores within the different populations might be explained better by differences in cognitive demands between these tests.

Summary of Findings

The results of the more recent studies support the long-held notion that patients with schizophrenia and patients with trauma spectrum disorders can be differentiated by assessment of their hypnotizability (see also Vermetten et al., 2008). The opposing findings from some of the earlier studies may be attributed to methodological shortcomings, including non-blinded assessments (sometimes by the patient's own treating physician), not screening schizophrenia patients for dissociative disorders, and overlooking cooperativeness as a potential moderating variable. High hypnotizability

appears to be rare among schizophrenic patients; if found it may suggest some form of dissociative psychosis instead (Spiegel et al., 1988). If we try to put this in perspective we know that the trance experience involves disciplined, attentive, focal concentration with a concomitant suspension of peripheral awareness. This is a complex process that requires intact mental functioning. In hypnotic assessment procedures, except for the eye roll phenomenon, the subject is asked to produce a change in sensation in one part of the body, such as an experience that a hand or arm is capable of involuntary movement, and then to terminate that experience at a prearranged signal (while responding to a range of questions). The cognitive impairment common in schizophrenia, not to mention disturbed thinking, delusions, and hallucinations, would likely hamper the performance of such tasks, and might be an explanation for the more significant differences found in the evidence of hypnotizability on the eye roll scores, which do not require substantial cognitive resources. Since we now know that hypnotic strategies can serve as aids in psychotherapy, measures of hypnotizability could be used to identify individuals who might be most responsive to hypnotic interventions. The studies to date indicate that research to further examine the capacity for hypnotic concentration and psychopathological processes is warranted.

Concluding Remarks

As we have demonstrated in this chapter, hypnotizability is a valuable and clinically measurable trait with stable characteristics. The measurement of hypnotizability has good clinical utility, potentially enabling clinicians to differentiate patients suffering from schizophrenia from those with severe trauma spectrum disorders – even if both groups experience an array of positive or negative hallucinations, apparent delusional thinking, and distorted sensory perceptions.

A review and analysis of the literature regarding the relationship between hypnotizability and psychopathology leads to the position that high hypnotizability could be seen as a diathesis for the development of a dissociative disorder. However, crucial studies remain to be conducted. We agree with Dell (2016) that, if high hypnotizability is indeed a diathesis for pathological dissociation, then (i) highly hypnotizable individuals who have a significant trauma history should report more dissociative symptoms than highly hypnotizable individuals who do not have a history of trauma, (ii) patients with the dissociative subtype of PTSD should be more hypnotizable than patients with PTSD who do not report dissociative symptoms (see Terhune, 2015, for support of this proposition), and (iii) patients with PTSD who experience dissociative flashbacks should be more hypnotizable than patients with PTSD who do not experience dissociative flashbacks. We hope that, with renewed interest in the concept of hypnotizability, these studies will be conducted in the near future.

As a treatment procedure that induces states of rest and relaxation and helps to reframe distressing experiences, the application of hypnotic interventions can be useful in many situations. Even though psychotic patients do not appear to be particularly hypnotizable, there are no contraindications to the therapeutic use of hypnosis in this group. Indeed, some studies have shown that, for example, using suggestion as a tool for reframing experience to recover from emotional stress in schizophrenia or in treatment procedures (such as isolation or seclusion) is not only safe, but can also be effective with

psychotic patients (Izquierdo & Khan, 2004; Pyun, 2013). Moreover, the responsiveness of patients with lower hypnotizability can be increased with proper hypnotic induction procedures. Once again, this highlights the importance of knowledge of, and skills in, hypnosis for psychologists and psychiatrists, not only for diagnostic, but also for treatment purposes. Now we would modify what Breukink suggested a century ago; even if a patient cannot be fully hypnotized, he probably still can be helped with psychotherapeutic techniques utilizing hypnosis.

We have argued that the nature of dissociation can help us to understand why there is such a high correlation between hypnotizability and dissociative disorders. Symptoms of dissociation convey important information about the response to traumatic stress. While dissociation may contribute to the appearance of physical and emotional control over the arousing impact of life-threatening stress, it can have a paradoxical rebound effect; ongoing dissociation may transform the physical helplessness at the time of the trauma into psychological helplessness during periodic incursions of traumatic memories and associations into consciousness. This can be seen as a double-edged sword; these individuals can use the ability to successfully block physical and emotional sensations (no pain, no feelings, 'not me') at the time of the trauma, but afterward pay the price for these over-modulated responses to reminders of the trauma in symptoms of numbing and episodes of amnesia, alternating with flashbacks and hyperarousal (Vermetten, Dorahy, & Spiegel, 2007).

To conclude, there is consistent evidence, particularly coming out of the more recent, well-designed studies, that patients with psychotic disorders such as schizophrenia are characterized by relatively low levels of hypnotizability. Thus, hypnotizability assessments could be useful in differentiating psychotic disorders from dissociative disorders. However, it is noteworthy that the most recent of the methodologically superior studies to have directly compared schizophrenia and dissociative disorder patients was conducted almost 25 years ago. Clearly, additional studies of the differential hypnotizability of psychotic and dissociative disorder patients are needed. The strength of the relationship between hypnotizability and dissociative disorders (high), in comparison to schizophrenia (low), may shed light on pathological pathways underlying these diagnostic entities. For these reasons, we hope that a new generation of students and mental health professionals will be informed of the diagnostic value of hypnosis and be trained in the administration of hypnosis for treatment purposes.

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15

Depersonalization/Derealization Disorder and Schizotypal Personality Disorder

Holly K. Hamilton and Daphne Simeon

For a large part of the early twentieth century, a disturbance in self-experience was emphasized as a core feature of schizophrenia, with classic accounts suggesting a fundamental abnormality of the intact self or self-consciousness (e.g. Bleuler, 1911; Kraepelin, 1896; see Parnas & Handest, 2003; Sass & Parnas, 2003). Currently, despite exclusion from the DSM-5 description of schizophrenia (American Psychiatric Association, 2013), some researchers continue to conceptualize schizophrenia as a fundamental alteration of *ipseity*, or the 'minimal self', characterized by distortions in consciousness and awareness (e.g. Sass & Parnas, 2003) and linked to several neural, cognitive, and behavioural abnormalities (e.g. see Nelson, Whitford, Lavoie, & Sass, 2014). Some have also sought to determine the extent to which aberrant self-experiences in schizophrenia overlap with characteristics of dissociative disorders, which involve alterations in the normal integration of consciousness, identity, memory, emotion, perception, and/or body representation as hallmark features (American Psychiatric Association, 2013). For example, individuals with dissociative identity disorder (DID) have been found to report as many or more first-rank Schneiderian symptoms as patients with schizophrenia (Ross et al., 1990; Chapters 4 and 12 of this book) and may be misdiagnosed with schizophrenia, while reports of experiences resembling those of dissociation are also often evident in schizophrenia (Merckelbach, à Campo, Hardy, & Geisbrecht, 2005; Chapter 11 of this book). Correlations between dissociative and psychotic-like experiences have even been reported in several non-clinical samples (e.g. Giesbrecht, Merckelbach, Kater, & Sluis, 2007; Merckelbach, Rassin, & Murris, 2000; Moskowitz, Barker-Collo, & Ellson, 2005; Pope & Kwapil, 2000; Chapter 13 of this book).

There is also recent support from an exploratory examination of literature accounts for an affinity between anomalous self-experiences described in schizophrenia and in depersonalization/derealization disorder (DRD), a dissociative condition characterized by feelings of unreality and/or detachment; even so, this body of work also highlights key differences and suggests that the fundamental disruption of *ipseity* may be more distinctive of the schizophrenia spectrum (see Sass, Pienkos, Nelson, & Medford, 2013). In addition, and perhaps most importantly, patients who meet diagnostic criteria for DRD, unlike patients diagnosed with DSM-5 or ICD-10 schizophrenia, do not exhibit psychotic symptoms and can be easily distinguished on this basis.

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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Rather, the phenomenology of depersonalization may more closely resemble that of schizotypal personality disorder (SPD; and of *schizotypy* in non-clinical samples), which can include odd and/or unusual thoughts and perceptions that also do not reach the level of full-blown psychotic conviction. Consistent with this notion, Watson (2001) suggested that, on the basis of a confirmatory factor analysis of several general measures of dissociation and schizotypy in a sample of college students, detachment/depersonalization items, out of all the dissociative symptom domains assessed, were the most strongly associated with features of schizotypy. However, other lines of research in clinical samples point to clear differences between DRD and SPD with regard to clinical presentation and associated abnormalities in neural and biological processes, highlighting the possibility that symptom assessment instruments are insufficient to effectively distinguish between the two constructs. To more clearly illuminate this important area, this chapter will summarize and highlight key similarities and differences in the phenomenology, cognition, and neural and biological correlates of DRD and SPD.

Symptoms and Clinical Presentations of Depersonalization/Derealization Disorder and Schizotypal Personality Disorder

DRD and SPD may appear to be similar based on clinical observations and patient reports that include unusual cognitive and perceptual experiences. According to the DSM-5, DRD is characterized by persistent or recurring feelings of unreality or detachment from one's own thoughts, feelings, sensations, body, or actions, and may include perceptual alterations, the experience of an unreal or absent self, emotional and/or physical numbing, a distorted sense of time (i.e. depersonalization), and/or detachment from, or a sense of unreality about, one's own surroundings (i.e. derealization; American Psychiatric Association, 2013). Individuals with DRD report feeling detached, estranged, or disconnected from their own self (Simeon, 2004), commonly described as having the sense of 'going through the motions' and watching oneself from 'a distance' or of being 'behind glass'. Importantly, however, these subjective 'as if' experiences (e.g. 'I feel *as if* I am not really here in my body') are not accompanied by unusual cognitive processes or delusions; individuals with DRD retain full 'reality testing' during their perceptually altered experiences. In contrast, SPD is often characterized by odd beliefs, magical thinking, suspiciousness and paranoid ideation, and/or ideas of reference in addition to unusual perceptual experiences. Furthermore, the 'detachment' that typically characterizes individuals with SPD involves restricted affect/constricted emotional experience and social withdrawal (American Psychiatric Association, 2013). These symptoms are less common in DRD.

Two-factor analytic studies have been conducted to characterize the phenomenology of depersonalization/derealization. Sierra, Baker, Medford, and David's (2005) examination of 138 patients with DRD yielded four underlying symptom dimensions: 'anomalous body experience', 'emotional numbing', 'anomalous subjective recall', and 'alienation from surroundings' (i.e. derealization). The only one of these factors that may correspond to the experience of an individual with schizotypal symptoms would be the 'anomalous body experience' factor. This factor consisted of the following items: (i) lack of body ownership feelings; (ii) feelings of loss of agency, or feeling a loss of control by the self; (iii) feelings of disembodiment, ranging from a non-specific feeling of not being

in the body to out-of-body-experiences; and (iv) somatosensory distortions, including, for example, the size of body parts or feeling particularly light. In the second study of 394 adults affected by chronic DRD (Simeon et al., 2008), five factors were extracted (four of which were quite similar to those identified in the Sierra et al. study): 'numbing', 'unreality of self', 'perceptual alterations', 'unreality of surroundings', and 'temporal disintegration'. Note that 'perceptual alterations', the factor most closely tied with schizotypy, was only one of five core components of the depersonalization syndrome.

A study by Simeon, Guralnik, Knutelska, and Nelson (2004) also specifically investigated the relationship between dissociation and schizotypy in DRD. Widely used measures of schizotypy, including the Perceptual Aberration Scale (PAS; Chapman, Chapman, & Raulin, 1978) and the Magical Ideation Scale (MIS; Eckblad & Chapman, 1983), as well as a common measure of dissociation, the Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986), were administered to 48 DRD patients and 22 healthy controls. It was found that the DRD group had significantly higher scores on both schizotypy scales than the healthy group; however, when DRD patients with comorbid personality disorders were excluded from the sample, the remaining 'pure' DRD group (n = 22) demonstrated high levels of perceptual aberrations but comparable scores on magical ideation to those of the healthy comparison group. In other words, convergence between dissociation and schizotypy only *consistently* emerged in DRD patients who also met diagnostic criteria for personality disorders (not only *schizotypal* personality disorder). In fact, in this subgroup, comorbidity with all three personality disorder clusters (A, B, and C) was associated with elevated levels of magical ideation. Furthermore, in contrast to Watson's (2001) findings, the depersonalization subscale of the DES was the *least* strongly correlated with schizotypy. This may be because Watson's (2001) results from a student population may not be generalizable to a population with pathological levels of depersonalization/derealization.

These findings highlight an important phenomenological difference between depersonalization and schizotypy, namely, that DRD is a disorder of self-perception with intact cognitions (Simeon et al., 2004), whereas schizotypy is often characterized by unusual thought processes. Consistent with this, although DRD patients have been shown to score higher than healthy individuals on a measure of fantasy proneness, these scores remain well within the normal range (Levin, Sirof, Simeon, & Guralnik, 2004). Perceptual distortions in schizotypy, on the other hand, are also accompanied by eccentric or unusual thoughts and/or odd behaviours that often contribute to pervasive interpersonal deficits and social discomfort (American Psychiatric Association, 2013). Indeed, the literature cautions against using perceptual aberrations as a single criterion to identify schizotypy in the absence of other measures (Barnes, Rhinewine, & Docherty, 2000).

Cognitive Profiles of Depersonalization/Derealization and Schizotypy

The cognitive profile of DRD echoes its common subjective reports of difficulties in perception, attention, and memory, especially under conditions of information overload (Guralnik, Schmeidler, & Simeon, 2000). Patients experiencing depersonalization frequently report a decreased ability to focus on complex tasks, increased forgetfulness in daily activities, and difficulty vividly retrieving memories (Simeon, 2004). One study

that employed a comprehensive neuropsychological test battery found DRD patients to show specific deficits in attention, short-term visual and verbal memory, and spatial reasoning, accompanied by normal general IQ, long-term memory, and executive functioning performance (Guralnik et al., 2000). The demonstrated attentional and perceptual difficulties, and particularly problems with effortful attentional control, were thought to reflect early encoding deficits that affect short-term memory and the ability to process new information but do not interfere with the ability to conceptualize and manipulate previously learned information. DRD participants also did not demonstrate abnormalities on measures of sequencing or reaction time, nor did they show the more pervasive cognitive impairments observed in other psychiatric disorders such as schizophrenia. Consistent with these findings, a more recent study found that compared to healthy volunteers, individuals with DRD exhibited deficits in immediate visual and verbal recall, but not in delayed recall, working memory, or general intelligence, further suggesting that DRD is associated with disruptions in early perceptual and attentional processes (Guralnik, Geisbrecht, Knutelska, Sirroff, & Simeon, 2007).

In addition, there is some evidence of difficulties with the cognitive processing of emotional material in DRD. For example, DRD patients appear to be less sensitive in detecting angry, but not neutral, facial expressions than controls (Montaigne et al., 2007). More recently, a study found that DRD patients exhibited objective and subjective emotional memory fragmentation (i.e. difficulties in forming a coherent narrative of an ordered event sequence), but that free recall of emotional material did not differ from controls (Giesbrecht, Merckelbach, Van Oorsouw, & Simeon, 2010).

A review of the literature suggests that cognitive deficits associated with SPD are more profound than those often observed in DRD (for a comprehensive review of cognitive functioning in SPD, see Raine, 2006). SPD appears to be associated with pervasive impairments in an array of cognitive domains including learning, sustained attention and vigilance, working memory, verbal and spatial memory, episodic memory, motor ability, inhibition, context processing, and time perception (see, e.g. Cadenhead, Perry, Shafer, & Braff, 1999; Chen, Hsiao, & Lin, 1997; Claridge & Beech, 1996; Lenzenweger, 2001; Lenzenweger, Cornblatt, & Putnick, 1991; Matsui, Sumiyoshi, Kato, Yoneyama, & Kurachi, 2004; McClure, Barch, Flory, Harvey, & Siever, 2008; Mitropoulou et al., 2005; Moritz & Mass, 1997; Park & McTigue, 1997; Raine, 2006; Roitman et al., 1997, 2000; Trestman et al., 1995; Voglmaier, Seidman, Salisbury, & McCarley, 1997; Voglmaier et al., 2000). Importantly, it has been suggested that working memory in particular is a core cognitive deficit that may account for other cognitive impairments in SPD (Mitropoulou et al., 2005), and one that is notably absent in DRD. Furthermore, there is also evidence to suggest executive functioning deficits in SPD (e.g. Trestman et al., 1995; Voglmaier et al., 1997) and even in high schizotypy, non-psychotic students (Suhr, 1997). In contrast, Guralnik et al. (2000) reported intact executive functioning in DRD.

Patients with SPD have also demonstrated cognitive processing deficits in social and emotional contexts. Studies have indicated that individuals high in schizotypal traits are impaired in perspective taking, understanding irony and false beliefs (Langdon & Coltheart, 1999, 2001), and processing information about themselves (Platek, Myers, Critton, & Gallup Jr, 2003), suggesting that impairment in social cognition and theory of mind is a central feature of schizotypy (Raine, 2006). In addition, SPD patients tend to have difficulty recognizing and labelling facial emotions (e.g. Mikhailova, Vladimirova, Iznak, Tsusulkovskaya, & Sushko, 1996; Waldeck & Miller, 2000). Moreover, it has been

found that symptoms of disorganization and lower quality of life in SPD patients are related to a bias toward perceiving facial expressions as more negative (Brown & Cohen, 2010). Furthermore, a more recent study has identified an impairment in empathy for negative affect in SPD (Ripoll et al., 2013). In summary, the cognitive impairments evident in SPD are reminiscent of schizophrenia and substantially different from those of DRD.

Neurobiological Functioning in Depersonalization/ Derealization and Schizotypy

Autonomic Nervous System

There is compelling evidence for autonomic hyporeactivity in DRD. Early case observations found a high-resistance, non-fluctuating skin conductance (SC) response at the onset of depersonalization in an anxious patient (Lader, 1975) and Kelly and Walter (1968) also suggested that depersonalization experiences reduce autonomic output, as evidenced by the use of forearm blood flow to index sympathetic functioning. More recently, Sierra et al. (2002) found that patients with DRD show a reduced magnitude and increased latency of SC response to unpleasant stimuli accompanied by an earlier response to a non-specific startle stimulus, suggesting selective inhibition of affective processing in the context of heightened arousal. Others have demonstrated that DRD patients have similar SC responses to healthy individuals, despite reporting high anxiety levels that were similar to that of an anxiety disorder group who typically demonstrate elevated SC (Sierra, Senior, Phillips, & David, 2006). Similarly, a study of undergraduate students showed that the occurrence of acute dissociative experiences, including depersonalization, during the presentation of aversive auditory stimuli was associated with an attenuated SC response (Giesbrecht, Merckelbach, ter Burg, Cima, & Simeon, 2008). Further elucidating the temporal pattern of autonomic responding in DRD, Giesbrecht and colleagues found that, compared to healthy individuals, DRD patients exhibited an earlier peak and subsequent flattening of SC levels when viewing an emotional video clip, followed by no recovery after clip offset (Giesbrecht et al., 2010). Finally, it has also been shown that a sample of DRD patients exhibited a marked decline in 24-hour urinary noradrenaline levels as depersonalization severity increases (Simeon, Guralnik, Knutelska, Yehuda, & Schmeidler, 2003). Although there is substantial evidence for autonomic blunting in DRD, there is no such evidence in schizotypy research to date.

Neuroendocrine System

The hypothalamic–pituitary–adrenal (HPA) axis, which plays a major role in mediating the physiological stress response, has been shown to have irregularities in DRD, although findings have been somewhat inconsistent. One study reported a trend toward lower basal salivary cortisol levels in patients with DRD when compared with individuals with major depressive disorder. However, the authors acknowledged that dysfunction of the HPA axis may be more readily detected by examining its response to a provocation challenge (Stanton et al., 2001). As such, Simeon, Guralnik, Knutelska, Hollander, and Schmeidler (2001) examined HPA axis function in DRD and found elevated basal cortisol compared to healthy individuals under strictly controlled

laboratory conditions; they also demonstrated a significant resistance to low-dose dexamethasone suppression, therefore suggesting reduced HPA axis sensitivity. These findings were replicated in a larger study that compared DRD patients to those with PTSD and to healthy individuals, which found DRD patients to have elevated basal cortisol and increased resistance to dexamethasone challenge, while dissociation severity was inversely correlated with cortisol reactivity to psychosocial stress in both the DRD and PTSD groups (Simeon et al., 2007). In addition, in non-clinical samples, individuals scoring high in depersonalization have been observed to have more pronounced cortisol responses when exposed to acute psychosocial stress, while those scoring high in absorption have attenuated responses (Giesbrecht, Smeets, Merckelbach, & Jelicic, 2007). As such, it appears that various types of dissociation may be differentially related to cortisol stress responses (Giesbrecht, Smeets et al., 2007).

Though findings are somewhat inconsistent, HPA axis dysfunction has been reported in schizotypy as well. Schizotypal patients have been shown to typically have high late-afternoon cortisol levels (Neumann & Walker, 1999), and a longitudinal study has noted elevated baseline cortisol levels to be associated with increased severity of SPD symptoms at two-year follow-up (Walker, Walder, & Reynolds, 2001). However, it is important to note that elevated basal cortisol in and of itself is a fairly non-specific finding and is reported across a variety of psychiatric disorders. In addition, in response to an acute metabolic stress, SPD patients, as well as healthy adults and major depressive disorder inpatients high in schizotypal traits, have all been shown to have lower cortisol responses compared to healthy control subjects (Hori et al., 2011; Mitropoulou et al., 2004; Schweitzer, Tuckwell, Maguire, & Tiller, 2001).

Neurochemistry

Neurochemical studies of neurotransmitter dysfunction have implicated dopamine and its cerebrospinal fluid and plasma metabolites, which have been extensively researched in schizophrenia and in SPD (e.g. see Raine, 2006; Siever & Davis, 2004). Siever and colleagues' bidirectional hypothesis argues that cognitive and perceptual deficits in SPD (similar to positive symptoms of psychosis) are associated with increased dopaminergic activity, while negative symptoms and interpersonal deficits are associated with decreases in dopamine activity (Siever, 1995; Siever & Davis, 2004). It has also been found that with amphetamine-induced dopamine release, SPD patients exhibit significant negative symptom improvement and some exhibit positive symptom improvement as well (Abi-Dargham et al., 2004). Together, these studies suggest that dopaminergic activity in SPD may be variable depending on predominant symptoms (Siever & Davis, 2004).

In contrast, there is no evidence for any dopamine abnormalities in DRD. Rather, several other neurotransmitter systems, including the serotonin, glutamate, and opioid systems, may be involved in depersonalization, although the evidence remains somewhat indirect and limited mostly to studies of chemicals that induce depersonalization symptoms (e.g. the NMDA receptor antagonist ketamine, cannabinoids, hallucinogens, and the kappa-opioid agonist salvia; see Simeon, 2004, Stein & Simeon, 2009). It is also important to note that there is no evidence that depersonalization symptoms improve with antipsychotic medication. In a review of the treatment histories of 117 patients

with DRD who received trials of typical or atypical antipsychotic medications, all participants reported that their depersonalization symptoms did not improve or became worse (Simeon, Knutelska, Nelson, & Guralnik, 2003).

Neural Circuitry

The neural circuitry that may subsume the two core phenotypic components of depersonalization, hypoemotionality and experiences of unfamiliarity, has been investigated via neuroimaging studies. It has generally been hypothesized that, in DRD, abnormalities in sensory cortex associative functioning may mediate perceptual disturbances (e.g. unfamiliarity), while frontal inhibition of limbic activity may be involved in hypoemotionality. Several studies provide preliminary support for this model of DRD. For example, using positron emission tomography (PET), Simeon and colleagues demonstrated that patients with DRD showed significantly lower metabolic activity in areas of the right superior and middle temporal gyri and significantly greater activity in parietal and left occipital areas. This led them to conclude that functional abnormalities of the hierarchical sensory association areas, including visual, auditory, and somatosensory cortex, as well as areas responsible for an integrated body schema, are present in DRD (Simeon et al., 2000). More recently, Ketay and colleagues examined unfamiliarity in DRD using a visual self-recognition task and found increased response in anterior cingulate cortex, medial prefrontal cortex, and left middle frontal gyrus to self (vs. stranger) faces, with depersonalization severity associated with activation in the latter two regions, suggesting deficits in implicit self-processing (Ketay, Hamilton, Haas, & Simeon, 2014).

The prominent model of hypoemotionality in DRD proposes bilateral corticolimbic disconnection with presumed prefrontal modulation of limbic activity ('corticolimbic disconnection hypothesis'; Sierra & Berrios, 1998). Consistent with this notion, Matthew et al. (1999) found that drug-induced depersonalization was associated with increased prefrontal and reduced subcortical cerebral blood flow with PET scanning, suggesting in depersonalized states a pattern of reduced activity in regions important to the processing of emotion. Findings from an fMRI study by Phillips et al. (2001) provide further evidence that individuals with DRD, compared to healthy individuals, exhibit a reduction of neural activation to aversive stimuli in regions previously implicated in affect processing, including the insula (responsible for processing disgust) and the occipital-temporal cortex, as well as increased activity in regions associated with emotion regulation (e.g. right ventral prefrontal cortex). Furthermore, Lemche et al. (2007, 2008) showed that DRD patients exhibit decreased activity in subcortical limbic areas to increasingly intense happy and sad facial expressions, as well as increases in bilateral dorsal prefrontal cortical activity to emotionally arousing stimuli. The authors found that dorsolateral prefrontal cortex activity was negatively associated with autonomic response to emotional stimuli. Taken together, these data suggest a potential neural basis for emotional detachment, a hallmark characteristic of DRD commonly described as 'thinking without feeling', that may be mediated by prefrontal activation and limbic inhibition. However, the precise mechanisms subsuming these identified abnormalities that account for emotional blunting symptoms in DRD have yet to be fully understood.

In contrast to DRD, there is a fairly extensive body of work identifying structural, anatomical, and functional brain abnormalities in SPD. Observed volumetric and

structural reductions have largely centred on temporal and frontal lobes, with temporal lobe abnormalities similar to those seen in schizophrenia and frontal lobe abnormalities seen to a lesser extent (for reviews, see Hazlett, Goldstein, & Kolaitis, 2012; Rosell, Futterman, McMaster, & Siever, 2014). Research has also more recently begun to focus on structural connectivity of white matter tracts using diffusion tensor imaging (DTI); this research has indicated reduced integrity of the uncinate fasciculus, which connects frontal and temporal lobes, thus suggesting that SPD shares with schizophrenia disrupted fronto-temporal connectivity (e.g. Guerrera et al., 2007; Nakamura et al., 2005; see Hazlett et al., 2012).

Functional neuroimaging studies of SPD patients have generally converged on abnormalities in prefrontal cortex activation. Specifically, several studies have demonstrated activation differences from healthy individuals during tasks with working memory and/or executive functioning demands (e.g. Buchsbaum et al., 1997, 2002; Koenigsberg et al., 2005). Furthermore, Buchsbaum et al. (2002) also reported increased medial frontal and Brodmann area 10 activation in SPD patients and reported lateral prefrontal as well as temporal activity that was intermediate between healthy controls and schizophrenia patients during a verbal learning task. In addition, abnormalities in superior temporal gyrus activation have been identified during auditory processing tasks (e.g. Dickey et al., 2008, 2010). Other areas argued to be dysfunctional in SPD include the basal striatal-thalamic and temporal lobe (McCloskey, Phan, & Coccaro, 2005; see also New, Goodman, Triebwasser, & Siever, 2008).

Finally, several electrophysiological investigations have provided insight into the neural mechanisms associated with cognitive deficits in SPD. For example, studies on suppression of the P50 event-related potential suggest that SPD patients exhibit deficits in sensory gating or in the ability to appropriately filter sensory stimuli (Cadenhead, Light, Geyer, & Braff, 2000; Cadenhead, Light, Geyer, McDowell, & Braff, 2002; Hazlett et al., 2015). Additionally, it was recently found that individuals high in schizotypal traits show reductions in an electrophysiological index of error monitoring, the error-related negativity (ERN; Kim, Jang, & Kim, 2015). Interestingly, individuals high in schizotypal traits were shown to demonstrate N1-suppression abnormalities to self-generated speech, similar to those previously reported in individuals with schizophrenia (Oestreich et al., 2015). In contrast, we are unaware of studies examining electrophysiological indices of cognitive functioning in individuals with DRD.

Clinical Vignettes

Case 1: Depersonalization/Derealization Disorder

Sam was 17 years old when he was first seen by a psychiatrist. He grew up at home with his father, younger brother, and mother, who was diagnosed with bipolar disorder. From as far back as Sam could remember, his mother had episodes of decompensation at home, in which she would fear that neighbours were out to hurt her because she had special powers. She would lock herself up in her room or become violent and rage at the family. From around the age of 8, Sam could recall feeling fleetingly unreal during these episodes, like he was living a dream. These bouts of unreality would typically last for a few hours. Sam was otherwise a well-adjusted boy, had many friends and hobbies, and

was a good student. When he was 16, his mother had a severe decompensation at home, during which she grabbed a kitchen knife in front of her children and attacked her husband believing that he was having an affair. He was able to subdue her and called 911, and she was taken to the hospital. Sam felt that his family was irreparably damaged, and that he may have lost his mother for good. As the Emergency Medical Service personnel forced her out of the home, Sam felt as if a veil appeared in front of his eyes; existence felt like a dream, his body felt deadened, and he went numb. Despite his father's efforts to comfort him and his mother's return home two weeks later, Sam continued to feel unreal and deadened over the next year. He did not want to burden his already burdened father by talking about the terrifying state of which he could not make sense. He knew that what he was feeling was strange and inexplicable, and did not want to share his experience with any of his friends in case they thought he had lost his mind. About a year later, he finally confided in his father, who arranged for him to see a psychiatrist. The psychiatrist diagnosed him with DRD.

Case 2: Schizotypal Personality Disorder

Ted grew up at home with a father with schizophrenia, along with his mother and younger brother. In contrast to his extroverted and well-adjusted brother, Ted always seemed odd, without close friends, withdrawn, and struggling in school. From an early age, he had unusual beliefs. He believed he had a sixth sense which allowed him to know others' thoughts and feelings without their communicating them to him verbally. He also believed in special meanings of numbers; *three* was a number foreboding bad things to come whereas *eight* was a number predicting good things to happen. Despite his father's major limitations due to his psychotic illness, in particular the lack of meaningful emotional connections to his children, he was never violent or abusive, and was compliant with treatment. Around age 16, Ted became increasingly withdrawn and started refusing to go to school. He explained to his mother that he sensed an omen that bad things were about to happen and that he had to stay home to feel safe. He also described to her his belief that life in this universe was a dream and that he was a robot going through the motions of life. He said his body did not feel like it belonged to him and that his existence was not real. After several months of declining school attendance and performance, the school requested that Ted be evaluated by the school psychologist. Ted reluctantly explained to the psychologist that, without being certain, he believed that all humans were living in an alternative universe of the dead, and that is why all humans felt deadened, dreamlike, and unreal, but usually hid it rather than admitted it. The real people probably lived, he guessed, in an alternative universe. When confronted about the reality of this belief, however, Ted would admit that he could not be certain and had no clear evidence, but strongly sensed that it was true. Ted was not overtly disorganized, and he denied frank hallucinations or fixed delusions. The psychologist diagnosed him with SPD, and speculated that this could evolve into prodromal schizophrenia.

Case Discussion

Sam had good premorbid functioning, and his unreality episodes were specifically triggered by overwhelming traumatic incidents at home. Even after the sense of unreality set in long-term, Sam knew it was not real and was concerned about sharing his experience

with others lest they thought he was 'going crazy' like his mother. Ted, in contrast, had a long-standing history of compromised functioning and odd beliefs, and his eventual pronounced feelings of unreality were associated, upon questioning, with overvalued cognitive aberrations incongruent with intact reality testing. Despite somewhat similar perceptual distortions, the two adolescents differed in their premorbid functioning, traumatic triggers, and cognitive elaborations of their unusual experiences.

Conclusion

Individuals with DRD have been reported to demonstrate alterations in the quality of the experience of the self, including a decreased sense of ownership or control of their own thoughts, feelings, or bodily sensations that may resemble schizophrenia-spectrum experiences (e.g. Sass et al., 2013). However, based on a review of the literature to date, it is evident that there are major differences in the symptomatology, cognitive profiles, and neurobiological abnormalities associated with DRD and SPD. Whereas individuals high in schizotypy tend to experience perceptual and cognitive aberrations, abnormalities in DRD are purely perceptual and are accompanied by clearly intact reality testing. Additionally, DRD patients exhibit no deficits in general intellectual or executive functioning, and impairments in perceptual, attentional, and emotional processes have been shown to be associated with sensory cortex and limbic activity and attenuated autonomic responses. In contrast, individuals with SPD demonstrate pervasive cognitive impairments that include executive dysfunction, which are associated with prefrontal and dopaminergic abnormalities. Despite partial phenotypic overlap between chronic depersonalization/derealization and the schizophrenia spectrum, particularly with regard to reported anomalies in self-experience, the totality of the depersonalization syndrome phenotype, the intact cognitive perspective on the distorted self-experience, as well as most available cognitive and biological findings, all support the view that the two comprise distinct constructs; nonetheless, the field would benefit from direct empirical comparisons.

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16

Post-traumatic Stress Disorder with Psychotic Features

Cherie Armour, Mark Shevlin, Ask Elklit, and James Houston

While post-traumatic stress disorder (PTSD) and psychotic disorders are classified as separate disorders, there is increasing evidence that the two may be related. Given the co-occurrence of psychotic experiences and symptoms of PTSD (Shaw, McFarlane, & Bookless, 1997), researchers have asked whether one may follow as a result of the other. Two main lines of enquiry have ensued. The first is based on the premise that the experience of psychosis, in terms of both symptomatology, and hospitalization and associated features, is traumatic enough to bring about post-traumatic symptomatology. The second is based on the perception that psychotic experiences are more common in those who suffer from the severest forms of PTSD.

The lifetime prevalence of trauma exposure has been shown to be greater in populations experiencing severe mental illness (SMI) compared to the general population. Mueser et al. (1998) reported that 98% of their SMI sample experienced at least one traumatic event. Likewise, Picken and Tarrier (2011) reported that at least one traumatic event was experienced by 91% of their sample of people with a diagnosis of schizophrenia. This exceeds the 40–80% rates reported for the general population (Breslau, Davis, Andreski, & Peterson, 1991; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Moreover, the prevalence of childhood physical and sexual maltreatment in the SMI population far exceeds that of the general population (Greenfield, Strakowski, Tohen, Batson, & Kolbrener, 1994; Mueser et al., 1998; Ross, Anderson, & Clark, 1994). Given that trauma exposure is a prerequisite for PTSD (American Psychiatric Association [APA], 2013), a number of studies have, unsurprisingly, reported elevated rates of PTSD in psychotic populations (McGorry et al., 1991; Priebe, Bröker, & Gunkel, 1998; Shaw, McFarlane, Bookless, & Air, 2002; Shaw et al., 1997).

Despite this, clinicians may be reluctant to diagnose an individual with comorbid psychosis and PTSD (Resnick, Bond, & Mueser, 2003) because psychotic disorders may be seen to supersede PTSD. In addition, symptoms of PTSD may be overlooked once an individual has received a diagnosis of a psychotic disorder (Sarkar, Mezey, Cohen, Singh, & Olumoroti, 2005). Mueser, Rosenberg, Goodman, and Trumbetta (2002) argued that, 'a parallel may be drawn between the lack of awareness in the past of substance abuse in SMI and the current under-detection of PTSD in these patients' (p. 135). Furthermore, a PTSD diagnosis is dependent on whether or not the patient

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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discloses a traumatic experience; some patients may choose not to do so (or may not recall the trauma), or clinicians may fail to recognize such reports. For example, hallucinations of sexual violence identified as connected to a previously disclosed sexual trauma may result in a PTSD diagnosis, whereas failure to connect the hallucination to a previous traumatic event may result in a psychotic diagnosis (Morrison, Frame, & Larkin, 2003). Diagnostic decision making is also complicated because PTSD and psychosis have etiological, phenomenological, and biological commonalities. Though the origins of psychosis have long been held to be biological in nature, PTSD, by its very definition, is attributable to external environmental stressors. A growing body of empirical research now supports the contention that childhood trauma, including sexual and physical abuse, can precipitate the development of psychotic symptomatology (Bendall, Jackson, Hulbert, & McGorry, 2008; Varese et al., 2012), thus suggesting that both PTSD and (at least some) psychoses may have a shared aetiology.

This chapter will first review the literature pertaining to post-psychotic PTSD by addressing the trauma of psychotic experiences and the trauma of associated hospitalization procedures. Then we will review the literature pertaining to the co-occurrence of psychotic experiences and PTSD – in other words, psychosis secondary to PTSD.

Post-psychotic PTSD: The Trauma of Psychotic Symptomatology and Hospitalization

Shaner and Eth (1989) first documented that the experience of schizophrenia could lead to the future development of PTSD symptoms. In the years since the publication of their seminal study, numerous researchers have addressed the contribution made to PTSD symptoms by psychotic symptomatology and hospitalization procedures, such as coercive interventions and involuntary treatment (Chisholm, Freeman, & Cooke, 2006; Frame & Morrison, 2001; Mueser, Lu, Rosenberg, & Wolfe, 2010; Mueser et al., 2002; Shaw et al., 2002; White & Gumley, 2009). More recently, Fornells-Ambrojo, Gracie, Brewin, and Hardy (2016) conducted a systematic review of psychosis-related PTSD that focused on the methodologies utilized. They concluded that the measures of PTSD used across studies were robust but that the methodological limitations did not allow for an overall estimate of PTSD prevalence (which ranged from 11 to 51% across the studies). In particular, the authors noted that the definition of psychosis-related trauma was not consistently specified, nor was the length of time since the traumatic event or events.

Bendall, McGorry, and Krstev (2006) examined a number of personal accounts of psychosis experience in addition to a range of studies using varying methodologies and suggested that around half would meet DSM-IV criteria for PTSD immediately following a psychotic episode. Research has further concluded that people suffering from a psychotic disorder have an increased vulnerability for developing PTSD from their psychotic experiences and the associated treatments. This is attributable to several factors: (i) the fear/terror generated by the symptoms themselves – such as paranoia and critical voices, (ii) the constant fear of having a psychotic relapse, and (iii) a low tolerance for the uncertainties they have to face (White & Gumley, 2009). Despite this, researchers have debated whether or not psychotic experiences and their associated, often involuntary, hospitalization procedures can be considered Criterion A traumas (i.e. the definition

of trauma) for PTSD (Shaw et al., 1997). The previous (DSM-IV) definition of a traumatic event, required for a PTSD diagnosis, had two parts. First of all, individuals must have 'experienced, witnessed, or been confronted with an event that involved actual or threatened death or serious injury, or a threat to the physical integrity of the self or others'. Secondly, the experience must have resulted in a response of 'intense fear, helplessness, or horror' (APA, 1994, p. 428). It was debated whether individuals who had suffered from psychotic symptoms had experienced events that involved *actual or threatened death or serious injury*, or a *threat to the physical integrity of the self or others*. To address this, Shaw et al. (1997) proposed that a revision of the DSM-IV trauma definition should include a threat to the *psychological* integrity of the self, which would clearly encompass psychotic experiences. There is consensus, however, that the experience of psychotic symptoms meets the subjective component of Criterion A (responding with intense feelings of fear, helplessness, or horror). This is supported by several studies that report that the objective experience of an event is often a poorer predictor of PTSD in comparison to the individual's subjective interpretation of the event (Alvarez-Conrad, Zoellner, & Foa, 2001; Bernat, Ronfeldt, Calhoun, & Arias, 1998). Nonetheless, criterion A2 was removed in DSM-5 as it was suggested that diagnostic accuracy was not improved with its inclusion (Friedman, Resick, Bryant, & Brewin, 2011). The DSM-5 has also limited the (objective) A1 criterion, so that it now reads: 'death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence'. Such a definition would not appear to allow psychotic symptoms or resultant hospitalization treatment to be defined as a PTSD precipitating event.

Definitional problems aside, an important line of enquiry has addressed whether symptomatology or hospitalization contributes most to the development of PTSD symptoms in psychotic patients. In a recent review of the literature (Berry, Ford, Jellicoe-Jones, & Haddock, 2013), it was suggested that, across all studies, high levels of distress with both symptoms and hospitalization were apparent. For example, Meyer, Taiminen, Vuori, Äijälä, and Helenius (1999) conducted a study that addressed PTSD symptomatology in 46 patients with schizophrenic and delusional disorders. One of the main aims of the study was to compare the impact that the experience of psychotic symptomatology and associated hospitalization procedures had on the likelihood of a PTSD diagnosis. It was concluded that 11% of the sample met the diagnostic criteria for PTSD. Focusing on PTSD symptom clusters, 37% met the symptom criteria for Intrusion, 14% for Arousal, and 17% for Avoidance/Numbing. The diagnosis of PTSD was based on the experience of psychotic symptomatology alone for 17% of the sample. With regard to PTSD symptoms, 69% were reported as being directly attributable to psychotic experiences. Hospitalization and associated procedures accounted for only 24% of all PTSD symptoms and no patients met the PTSD diagnostic criteria based on hospitalization alone. Frame and Morrison (2001) further attempted to separate the contribution of psychotic experiences and hospitalization to PTSD symptoms. They concluded that 52% of the variance in PTSD scores was directly attributable to psychotic experiences, but only 6% of the variance in PTSD scores was attributable to hospitalization procedures. Mueser et al. (2002) asked patients to identify the 'most upsetting' aspects of their psychotic episodes. A full two-thirds (66%) identified the psychotic experiences themselves as the most upsetting events, while 26% named the hospitalization procedures, and 8% the combination of the two. Of interest, while hospitalization procedures better meet the definitional criteria for a PTSD precipitating

event, psychotic experiences have been consistently shown to be a better predictor of PTSD symptoms; this suggests that the DSM-IV (APA, 1994) as well as DSM-5 (APA, 2013) definitions may be somewhat problematic.

These conclusions must be treated with caution, particularly as the relationship between psychotic experiences and hospitalization is complex and intertwined. For example, the severity of both is likely to be highly correlated, in that those who experience the greatest degree of symptomatology are also likely to experience the most severe and aversive hospitalization procedures. Consideration must also be made in relation to the high prevalence of additional criterion A traumas experienced by psychotic populations, such as childhood abuse (see Chapter 9 of this book). Separating the effects of other potentially multiple traumatic experiences, in addition to psychotic experiences and hospitalization procedures, is problematic and rarely attempted in these studies (Larkin & Morrison, 2006; Mueser et al., 2002). Berry et al. (2013) have gone some way to furthering our understanding of these processes by identifying seven themes relating to the likelihood of developing psychosis-related PTSD: duration of psychosis, symptoms, hospital experiences, appraisals of psychosis, insight and coping, trauma history, and certain patient demographics. The authors concluded that the rates of psychosis-related PTSD were between 11 and 67% in the studies examined and that hospitalization and the experience of psychosis were consistently distressing.

Co-occurring PTSD Symptoms and Psychotic Experiences

The second line of research focuses on whether psychotic experiences may be secondary to PTSD, leading researchers to question whether PTSD and psychotic experiences may exist on a continuum of severity, with PTSD precipitating the development of psychotic experiences (Morrison et al., 2003). This line of enquiry dates back to 1973, when Van Putten and Emory (1973) acknowledged that combat veterans who had been diagnosed with schizophrenia may have more accurately been experiencing 'traumatic neurosis'. Subsequently, in the late 1980s, Kinzie and Boehnlein (1989) reported the co-existence of psychotic experiences and PTSD in Cambodian refugees. Several recent studies have since suggested that severe PTSD may result in psychotic experiences (Mueser & Butler, 1987; Sautter et al., 1999; Shevlin, Armour, Murphy, Houston, & Adamson, 2011). While much of the earlier work in this area focused on veteran samples, more recent work has employed the use of non-veteran samples (e.g. Anketell et al., 2010; Sareen, Cox, Goodwin, & Asmundson, 2005; Sautter et al., 1999; Shevlin et al., 2011).

Veteran Studies

Hamner and Fossey (1993) reviewed the clinical charts of 214 veterans who had previously received treatment for PTSD at a Department of Veterans Affairs clinic. The review revealed that clinicians had noted psychotic experiences or disorders in the charts of 15% of the sample, suggesting that the presence of psychotic features within PTSD was more common than originally thought. A later study by Butler, Mueser, Sprock, and Braff (1996) assessed 38 male veterans, of whom 20 received a PTSD diagnosis. The veterans who received a PTSD diagnosis ($n = 20$) showed elevated rates of

psychotic experiences (hallucinations, delusions, and bizarre behaviour, but not thought disorder) compared to the 18 veterans who were not diagnosed with PTSD.

Hamner and colleagues (Hamner, 1997; Hamner, Frueh, Ulmer, & Arana, 1999; Hamner et al., 2000) conducted three studies addressing the presence and nature of psychotic experiences within PTSD. The first study (Hamner, 1997) assessed 25 veterans with no prior histories of psychotic disorder who were attending a PTSD treatment clinic. Nine veterans (n = 36%) reported psychotic experiences. The second study (Hamner et al., 1999) assessed 45 veterans, all of whom met the DSM-IV criteria for PTSD. Just under half of the sample (n = 22) reported psychotic experiences, with all 22 reporting hallucinations and 19 (n = 86%) reporting delusions. The third study (Hamner et al., 2000) aimed to assess if individuals suffering from PTSD with psychotic experiences differed from schizophrenic patients. The researchers compared 40 DSM-IV PTSD-diagnosed veterans with psychotic experiences to 40 patients who met the DSM-IV criteria for schizophrenia. Patients with a diagnosis of schizophrenia reported significantly higher scores on positive psychotic experiences in general and severity of delusions, but not on the severity of hallucinations or overall levels of psychopathology, compared to psychotic PTSD patients. Psychotic PTSD patients were more hostile than schizophrenia patients.

Two studies were conducted on Croatian veterans. Ivezic, Bagaric, Oruc, Mimica, and Ljubin (2000) assessed 45 Croatian veterans who had been hospitalized for combat-related psychological disturbances and who met the DSM-IV (APA, 1994) criteria for PTSD. Eight of the veterans (18%) reported having psychotic experiences. Of note, all of the reported hallucinations and delusions contained combat-related themes. Even so, the authors argued that the hallucinations differed from PTSD flashback symptoms in that they were not direct recollections of a traumatic event. Subsequently, Kastelan et al. (2007) conducted a study on 91 Croatian veterans who were suffering from lifetime, combat-related PTSD. All veterans were assessed for psychotic experiences and were then subsequently divided into three groups: (i) PTSD with no psychotic experiences (n = 30), (ii) PTSD with sub-threshold psychotic experiences (n = 45), and (iii) PTSD with psychotic experiences (n = 18). Interestingly, the three groups could not be differentiated on PTSD symptom severity, level of traumatization, or depression. This is inconsistent with previous studies, which have found greater psychotic symptomatology in those with more severe PTSD symptoms (Kinzie & Boehnlein, 1989; Sautter et al., 1999). However, this study did confirm previous reports that auditory hallucinations were the most common psychotic experiences in this population (Kastelan et al., 2007). Notably, Kastelan et al. (2007) excluded visual hallucinations from the psychotic experiences group, as visual hallucinations were considered too similar to PTSD symptoms of intrusion, in particular flashbacks. The rationale for this decision appears questionable, however, as previous studies have successfully distinguished all forms of hallucinations from experiences that occurred only during traumatic flashbacks (Hamner, 1997; Ivezic et al., 2000).

In a recent study, Lindley, Carlson, and Hill (2014) assessed a number of psychotic symptoms in 30 male Vietnam veterans with severe and chronic PTSD. The authors reported a large endorsement rate of psychotic symptoms (two-thirds of the sample), with these symptoms related to severity of PTSD as well as dissociation and general psychopathology. They did not find severity of psychotic symptoms to be related to the presence of PTSD.

Non-veteran Studies

Recently, research has been extended to non-veteran samples – the earliest studies on this population were conducted by Sautter in 1999 and Sareen in 2005 and their colleagues. The former recruited patients from mental health programmes in the United States ($n = 62$) and separated them into three groups: (i) a PTSD-only group ($n = 22$), (ii) a psychosis-only group ($n = 16$), and (iii) a group with PTSD who reported psychotic experiences ($n = 24$). Similar to the results from studies based on veteran samples, participants in the group who experienced PTSD *and* psychotic experiences reported significantly higher levels of overall psychopathology, aggressiveness, and paranoia, in relation to the two comparison groups. Once again, the presence of psychotic experiences was related to PTSD symptom severity (Sautter et al., 1999). The study by Sareen et al. (2005) investigated the co-occurrence of psychotic experiences and PTSD through the use of a nationally representative general population survey, the National Comorbidity Survey (NCS), in which 5877 participants were assessed for the presence of various forms of psychopathology. PTSD criteria were met by 429 participants. Psychotic experiences were significantly more likely to be endorsed by those who met PTSD criteria compared to those who did not ($n = 5446$) after adjusting for socio-demographics and psychiatric and medical comorbidity (odds ratios [OR] = 1.83; 95% confidence interval [CI]: 1.43–2.45; $p < 0.001$).

In 2007, Scott and colleagues addressed this issue with 66 adolescent psychiatric inpatients, aged 13–16 years, who were diagnosed as suffering from PTSD ($n = 20$), psychosis ($n = 18$), or other disorders ($n = 28$; e.g. mood and eating disorders). Hallucinations were very common throughout, and the prevalence of hallucinations did not differ between the PTSD and psychosis groups. This finding prompted the researchers to conclude that the 'prevalence, form, and content' of hallucinations experienced by adolescents with PTSD were 'not distinguishable' from those experienced by adolescents with psychotic disorders (p. 47).

More recently, Anketell and colleagues assessed 40 Northern Irish participants who had experienced trauma related to the Northern Irish political conflict (Anketell et al., 2010). All 40 participants met PTSD diagnostic criteria. Twenty of the participants experienced auditory verbal hallucinations, but two were excluded from the study on the basis that their hallucinations appeared to be related to an acute grief reaction. Unlike previous studies, Anketell et al. (2010) took a phenomenological approach. They described the participants' hallucinations in detail, discussing characteristics such as who the voice hearer perceived the voices to belong to, what was being said by the voices, whether or not the voices were clear, and how often the voices were heard. Based on this analysis, the authors concluded that most of the auditory hallucinations were 'trauma related'.

As a whole, this body of research has led to suggestions for a psychotic subtype of PTSD. This issue has been explored in more detail in two large-scale population-based studies. Shevlin et al. (2011) employed the NCS data previously utilized by Sareen et al. (2005) but took a novel analytical approach. The analysis was focused on participants who met PTSD diagnostic criteria, but the authors excluded those who also met the diagnostic criteria for a psychotic disorder ($n = 19$). The rationale for doing so was to focus on psychotic experiences present in PTSD rather than psychosis and PTSD comorbidity. The authors employed Latent Class Analysis (LCA), which is a

person-centred statistical approach that focuses on how similar individuals are in terms of their responding to a series of questions. LCA is a data reduction technique which identifies clusters of people with similar response patterns across a number of binary coded items, thereby examining the natural clustering of response patterns and offering a parsimonious classification of complex data. The authors included questions related to both psychotic and PTSD symptoms in their analysis and were able to determine the existence of underlying sub-groups of individuals who answered the symptom questions in a similar manner. A four class (e.g. group) solution was revealed. Two of the groups were characterized by high probabilities of endorsing psychotic symptoms and one of these groups also had high probabilities of endorsing PTSD symptoms. The most commonly endorsed psychotic symptom in this group was visual hallucinations, along with paranoid delusions. This was contrary to much of the previous research, which reported that auditory hallucinations were more prevalent in psychotic PTSD individuals than visual hallucinations. However, this may also have been a result of excluding those with an actual psychotic diagnosis from the analysis. One likely possibility is that many of those reporting auditory hallucinations may have received a psychotic diagnosis and so would not be represented in the analyses. Further analysis concluded that individuals in the group who experienced high levels of both PTSD and psychotic experiences were also those who had poorer clinical profiles. Indeed, these group members were likely to have additional diagnoses of alcohol dependence, mania, depression, generalized anxiety disorder, and bipolar disorder. Interestingly, the four groups could not be distinguished from one another on the type of traumas experienced. Thus, initial empirical reports suggest that a psychotic PTSD subtype may be characterized by the presence of both hallucinations and delusions, with a predominance of the former. There is also evidence that psychotic experiences are reported by individuals who have the greatest severity of post-traumatic symptomatology.

Using data from the Adult Psychiatric Morbidity Survey (APMS), Alsawy, Wood, Taylor, and Morrison (2015) examined the relationship between symptoms of PTSD and paranoia/auditory hallucinations. The authors reported significant relationships between reliving/arousal symptoms and paranoia, as well as reliving symptoms with auditory hallucinations. In addition, a strong dose-response effect was reported in that the number of PTSD symptoms increased the odds of experiencing both paranoia and auditory hallucinations. They suggested that similar cognitive mechanisms could be at work in both PTSD and psychosis, with the interpretation individuals making of their experiences being determinative in seeing who develops PTSD or psychosis; for example, whether or not the person attributes their symptomatology to a traumatic experience. This is an interesting addition to the literature in this area, and may have strong implications for treatment, particularly in terms of early identification and potential preventative treatments.

In terms of treatment, a pilot study examined the effectiveness of Eye Movement Desensitization and Reprocessing (EMDR) for treating PTSD in a sample of patients with a psychotic disorder. Van den Berg and Van der Gaag (2012) reported positive outcomes and suggested that EMDR was both safe and effective in treating PTSD in this population (see also Chapter 25 of this book). The authors reported positive treatment effects for auditory hallucinations, delusions, anxiety, depression, and self-esteem.

The Potential Role of Dissociation in the Development of a Psychotic PTSD Subtype

Dissociation is broadly described as a disruption of the integrated functions relating to consciousness, memory, identity, or perception (APA, 2013). Dissociation has long been associated with PTSD. Peri-traumatic dissociation creates fragmented memories of a trauma event, which are subsequently thought to develop into post-traumatic symptomatology (Van der Hart, Nijenhuis, & Steele, 2005). Indeed, several studies have found a robust significant association between peri-traumatic dissociation and the subsequent development of PTSD (Breh & Seidler, 2007; Lensvelt-Mulders et al., 2008; Ozer, Best, Lipsey, & Weiss, 2008). Notably, however, Bryant (2007) argued that persistent, rather than peri-traumatic, dissociation is more predictive of subsequent psychopathology, including PTSD. Indeed, a number of studies have shown that dissociation occurring at the time of the trauma or immediately post-trauma is less predictive of PTSD compared to ongoing dissociative symptomatology (Briere, Scott, & Weathers, 2005; Murray, Ehlers, & Mayou, 2002; Panasetis & Bryant, 2003). Furthermore, dissociation severity has been shown to be linearly related to PTSD severity (Breh & Seidler, 2007; Cloitre et al., 2009) with the two correlating at approximately 0.60 across studies (Briere et al., 2005; Cloitre et al., 2009). Studies such as these have led some to suggest that PTSD could be classified as a dissociative disorder (Van der Hart et al., 2005; Van der Kolk et al., 1996).

A recent development in regard to PTSD and dissociative features and their proposed relationship is the introduction of a dissociative subtype of PTSD in the DSM-5. This subtype is defined by symptoms relating to derealization and depersonalization. Such a subtype could therefore overlap with a psychotic PTSD subtype, as specific psychotic symptoms, particularly auditory hallucinations, have been posited to be dissociative in nature (Moskowitz & Corstens, 2007; Chapter 13 of this book). In addition, Brewin and Patel (2010) found auditory hallucinations, common in both veteran and civilian PTSD samples, to be highly correlated with dissociation scores.

To date, a number of studies have provided evidence for the existence of a dissociative PTSD subtype (Armour, Elklit, Lauterbach, & Elhai, 2014; Armour, Karstoft, & Richardson, 2014; Blevins, Weathers, & Witte, 2014; Frewen, Brown, Steuwe, & Lanius, 2015; Műllerová, Hansen, Contractor, Elhai, & Armour, 2017; Steuwe, Lanius, & Frewen, 2012; Wolf et al., 2015; Wolf, Lunney, et al., 2012; Wolf, Miller, et al., 2012). The most comprehensive investigation into the mental health comorbidities of dissociative PTSD was undertaken by Blevins and colleagues. They found that the dissociative PTSD group scored higher than the PTSD-only group on a variety of mental health measures, including psychotic experiences (Blevins et al., 2014). Research is now needed to explore more fully the association between dissociative PTSD and psychotic symptoms, with regard the potential dissociative underpinnings of these manifestations.

Conclusion and Future Directions

This chapter has examined two lines of enquiry relating to the relationship between PTSD and psychotic disorders. In terms of post-psychotic PTSD (i.e. the trauma of psychotic experiences and hospitalization), we have outlined a number of definitional difficulties, both historically, relating to DSM-IV, and currently, relating to the definition of PTSD

within DSM-5. Fornells-Ambrojo et al. (2016) also highlighted a series of methodological difficulties across studies in this area, including the inconsistent reporting of time duration since trauma. Additionally, research has suggested that while both symptomatology and hospitalization have been shown to contribute to the development of PTSD symptoms, and while hospital procedures may better meet the criteria for PTSD, psychotic experiences have been consistently shown to better predict PTSD symptoms, adding to the debate around definitional difficulties within the current diagnostic systems.

An important question relates to whether or not reported psychotic experiences, particularly hallucinations, are simply variants of post-traumatic symptomatology such as flashbacks. We would argue that they are not, given that several studies have differentiated hallucinations from post-traumatic symptomatology on the basis that the former are not direct recollections of traumatic events. Furthermore, a number of studies have shown that scales measuring psychotic hallucinatory experiences are not correlated with scales of post-traumatic intrusive symptomatology (e.g. Sareen et al., 2005). These findings suggest that a psychotic PTSD subtype could be an accurate way of diagnosing some trauma survivors. Braakman, Kortmann, and Van den Brink (2009) detailed several criteria which could be applied to establish the validity of a diagnostic entity, such as a psychotic PTSD subtype. First, the disorder must be identified as having its own unique clinical description. We argue that a psychotic PTSD subtype, which has been recently identified within the literature, is differentiated from PTSD by the presence of hallucinations and delusions, of which the former are more prevalent. Additionally, the psychotic PTSD subtype is pervasive, chronic, and severe. Second, the disorder must be clearly delineated from related disorders. Again, the presence of hallucinations and delusions delineates the psychotic PTSD subtype from PTSD. Furthermore, the psychotic PTSD subtype can be delineated from schizophrenia in that delusions in the psychotic PTSD subtype are often paranoid and persecutory, whereas in schizophrenia they are often bizarre and complex (Braakman et al., 2009). Moreover, the psychotic PTSD subtype presents without thought disorder, which is typically common in schizophrenia (Pierre, 2010). Third, the disorder should have a typical course. Studies have shown that, similar to PTSD, a psychotic PTSD subtype does lessen in severity over time (McGorry et al., 1991; Shaw et al., 2002). Fourth, the disorder should have a typical response to treatment. Currently, to our knowledge, there has been no research conducted in relation to this point for a psychotic PTSD subtype. Finally, distinctive biological characteristics of the disorder should be apparent. Pierre (2010) reported that individuals suffering from the psychotic PTSD subtype display increased levels of serotonin production and increased monoamine oxidase B activity compared to individuals suffering from PTSD alone. All of this leads us to argue that a psychotic PTSD subtype should be on its way to being established, in a similar way to how the dissociative PTSD subtype was formally established in DSM-5. Nonetheless, future research must further investigate the interplay between trauma, dissociation, psychotic experiences, and PTSD to understand better this complex network of relationships.

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17

Memory Disturbances in Schizophrenia and Post-traumatic Stress Disorder

Cherrie Galletly and Sandy McFarlane

Both schizophrenia and post-traumatic stress disorder (PTSD) are associated with cognitive impairments, including deficits in learning and memory. This chapter begins with consideration of the premorbid factors that can predispose to schizophrenia and PTSD. While generally the vulnerability factors for PTSD and schizophrenia differ, there is evidence that below average intelligence is a risk factor for both disorders. In addition, childhood trauma, particularly childhood sexual abuse, is a common cause of PTSD and is highly prevalent in people who later develop psychotic disorders, including schizophrenia (Read, Van Os, Morrison, & Ross, 2005). For example, Cutajar et al. (2010) linked forensic records of child sexual abuse with mental health records, and found that people who had been sexually abused as children were three times more likely to have a later diagnosis of a psychotic disorder (including schizophrenia). The odds ratios for developing psychosis in adolescence or adulthood, for people who have experienced childhood trauma, range from 1.6 to 6.0 (Schäfer & Fisher, 2011). There is also extensive evidence that childhood trauma can affect brain development and therefore cognitive functioning (Lupien, McEwen, Gunnar, & Heim, 2009). The relationship between PTSD and schizophrenia is complex and many factors can confound comparisons between them.

Similarities between the symptoms of schizophrenia and those of PTSD have been highlighted by several authors (Hamner et al., 2000; McGorry et al., 1991; OConghaile & DeLisi, 2015). Hallucinations are a core symptom of schizophrenia and can occur in any sensory modality. In PTSD, vivid intrusive memories and flashbacks can similarly include sounds, smell, touch, taste, and visual re-experiencing of the trauma. Both hallucinations and flashbacks can therefore be understood as sensory experiences in the absence of external stimuli and can be conceptualized as severe disorders of perception. Indeed, it has been suggested that hallucinations may be variants of post-traumatic intrusions (Hardy et al., 2005). There are also parallels between delusional mood in schizophrenia, where there is a heightened sense of awareness and expectation, and hypervigilance in PTSD. Early studies of veterans with combat-related PTSD (Butler, Mueser, Sprock, & Braff, 1996; David, Kutcher, Jackson, & Mellman, 1999) reported that 25–49% of these veterans had hallucinations and 13–45% had delusions. Flashbacks and intrusive memories triggered by subtle environmental cues could resemble passivity

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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phenomena in that the person experiences no control over their emotional responses. In addition, the social withdrawal, avoidance, and lack of motivation observed in PTSD parallel the negative symptoms of schizophrenia. It therefore seems that no single set of symptoms clearly characterizes only schizophrenia or only PTSD.

Yet, clinical populations with PTSD and schizophrenia tend to differ across many parameters – including age of onset (more variable in PTSD), gender distribution (more women in PTSD samples, more men in schizophrenia samples), and premorbid function (generally better in PTSD). These factors make direct comparisons between clinical samples difficult. Studies which simultaneously assess patients with PTSD and with schizophrenia have the advantage of standardized selection and testing procedures. However, such comparative studies are relatively rare, as most researchers tend to investigate abnormalities within specific clinical categories. This chapter explores cognitive disturbances in schizophrenia and PTSD, highlighting studies that do provide direct comparisons.

Cognitive Factors Associated With Vulnerability to Schizophrenia and PTSD

Cognitive Risk Factors for Schizophrenia

Both genetic and neurodevelopmental factors are known to be important in the aetiology of schizophrenia. Some of the genes that are implicated, such as those coding for catechol-*O*-methyl transferase (COMT), are associated with cognitive function; the variant of COMT associated with schizophrenia is associated with increased frontal dopamine levels and impaired working memory functions (Caspi et al., 2005). Prenatal factors, including nutritional deprivation and infections, and pregnancy and birth complications are also associated with later schizophrenia (McGrath & Susser, 2009). None of these factors has been linked to PTSD. A meta-analysis by Khandaker, Barnett, White, et al. (2011) found that lower premorbid IQ is a risk factor for schizophrenia, such that the risk of schizophrenia increases by 3.7% for every point decrease in IQ. Verbal and non-verbal IQ measures were equally implicated.

Cognitive Risk Factors for PTSD

Most of those exposed to a traumatic event do not develop PTSD. Individual differences in vulnerability, along with factors related to the trauma itself, determine which people will respond pathologically (Heinrichs et al., 2005; Hooberman, Rosenfeld, Rasmussen, & Keller, 2010). Research utilizing testing undertaken prior to combat exposure has shown that veterans who later developed PTSD had lower intelligence, lower levels of educational achievement, lower aptitude for arithmetic, and more self-reported school difficulties, than veterans who did not develop PTSD (Kulka et al., 1990; Macklin et al., 1998; Pitman, Orr, Lowenhagen, Macklin, & Altman, 1991). However, while these findings suggest that people with lower IQs are more vulnerable to PTSD, it has also been shown that younger people with higher IQs experience less exposure to trauma (Breslau, Lucia, & Alvarado, 2006) and that children who have limited cognitive capacities are more likely to be the victims of sexual abuse (Horner & Hamner, 2002). In other words, people with higher intelligence are better at avoiding traumatic experiences.

Comparing Cognitive Risk Factors in Schizophrenia and PTSD

It can be concluded that samples of people with either schizophrenia or PTSD will most likely have lower than average premorbid IQ. However, most of the published studies use very different patient populations, so it is not possible to easily compare IQ between the two disorders. A few studies have directly compared these groups. Duke, Allen, Ross, Strauss, and Schwartz (2010) compared IQ in three groups: (i) people with PTSD, (ii) people with schizophrenia, and (iii) people with comorbid schizophrenia and PTSD. They utilized three subtests of the Wechsler Adult Intelligence Scale (WAIS)-III. The patient groups were not matched for age (the PTSD subjects were younger). Duke et al. (2010) found that the PTSD group had higher scores than the other two groups on all three WAIS-III subscales. Fan et al. (2008) compared 15 people with comorbid PTSD and schizophrenia with 72 people with schizophrenia alone. Samples were matched for age, and a small difference in WAIS-III digit span scores was found (worse performance by the comorbid group) but no difference in digit symbol scores. In conclusion, studies indicate that IQ is most likely lower, on average, in people with schizophrenia compared to people with PTSD, but those with comorbid schizophrenia and PTSD may have even greater deficits on some aspects of cognitive functioning (e.g. working memory). However, more research with better matched samples is required.

Memory Disturbances in Schizophrenia and PTSD

Overview

Memory can be assessed using a variety of approaches including neuropsychological tests, laboratory-based tasks, and electrophysiological methods, such as event-related potentials. The most commonly studied components of memory are episodic memory (memory for past events) and working memory (temporary storage and manipulation of small amounts of information). Semantic memory, which includes retention of memory for factual knowledge and language, is generally preserved in psychiatric disorders. Autobiographical memory, the ability to recall personal facts and events, has elements of both episodic and semantic memory. This is a relatively new research area that may assist in understanding the development and maintenance of a sense of personal identity (Akbarian et al., 2015; MacDougall, McKinnon, Herdman, King, & Kiang, 2015).

Episodic Memory

Episodic Memory in Schizophrenia

Numerous studies have shown that performance on simple episodic memory tasks, which involve learning, recall, and recognition, is impaired in schizophrenia. All of the components (learning, recall, and recognition) of episodic memory are involved and moderate-to-large effect sizes have been reported. Imaging studies have shown abnormal patterns of brain activity during episodic memory tasks, particularly in the prefrontal cortex and hippocampus (Ragland et al., 2009). These deficits are generally not due to medication, although the anticholinergic actions of some drugs might aggravate memory deficits. Cognitive deficits, including difficulties with memory, tend not to be related to the severity of positive symptoms (hallucinations and delusions), but are

more closely related to negative symptoms (Green, 2006). Importantly, these deficits have been found to predict outcome, being associated with worse employment, social functioning, and quality of life. There has therefore been considerable interest in cognitive remediation, in the hope that teaching people with schizophrenia better cognitive strategies might result in improved outcomes (Barlati, Deste, De Peri, Ariu, & Vita, 2013).

Episodic Memory in PTSD

Many studies have investigated registration, encoding, recall, and recognition of trauma-related words and pictures, and there are usually abnormalities in the processing of these stimuli (Brewin, 2011; Moore, 2009). Studies of performance on standardized, trauma-neutral memory tasks have yielded inconsistent results. People with PTSD generally have impaired memory, compared to normal controls, with small-to-moderate effect sizes, but some studies do not find any deficits in PTSD. A meta-analysis reviewed results in different groups with PTSD, including combat veterans, abused individuals, and refugees and war victims (Qureshi et al., 2011). As might be expected there were differences between these populations, with war trauma tending to be more likely associated with deficits in cognition. The majority of studies (12 of 18) did not find memory impairment in PTSD when the PTSD subjects were compared with controls with a history of trauma, and after controlling for confounding factors such as depression and substance use. In conclusion, studies investigating episodic memory functioning in people with PTSD have yielded widely varying results.

Comparing Episodic Memory in Comorbid Schizophrenia and PTSD

Goodman et al. (2007) found that 14 survivors of the Holocaust who had schizophrenia and comorbid PTSD performed significantly worse than patients with schizophrenia who had not been exposed to the Holocaust on tests of processing speed, verbal memory, and visual scanning. These patients were elderly (mean age 66–70 years) and confounds, such as prolonged starvation in the Holocaust survivors, were not considered. Fan et al. (2008) reported that 15 patients with schizophrenia and PTSD exhibited poorer performance on tests of attention, working memory, and executive functions than patients with schizophrenia alone, but there were no differences on a test of verbal memory. Duke et al. (2010) have undertaken the largest study to date ($N = 94$), comparing cognitive function in four groups – PTSD alone, schizophrenia alone, comorbid PTSD and schizophrenia, and controls. The PTSD subjects were significantly younger than the schizophrenia subjects and comorbid anxiety, depression, and substance use were not excluded. Both schizophrenia groups performed significantly worse than the PTSD and control groups across all neurocognitive domains including verbal and visual learning and memory. In general, there were no significant differences in cognitive function, including tests of memory, between people with schizophrenia who had comorbid PTSD and those who did not. Duke et al. (2010) concluded that comorbid PTSD did not adversely affect cognition in schizophrenia.

Working Memory

Working memory involves the temporary retention and manipulation of small amounts of information. The interplay between selective attention, consciousness, and working memory is complex, but working memory is clearly crucial to moment-by-moment engagement with the environment.

Working Memory in Schizophrenia

Working memory tends to be one of the domains of cognitive function most affected in schizophrenia (see Chapter 18 of this book). A review by Lee and Park (2005) found that a significant deficit in working memory was present in schizophrenia, was modality independent, and was most likely linked to difficulties with encoding and/or the early processes involved in maintaining the newly learned information in working memory stores. Functional imaging studies and psychophysiological studies have shown that brain functioning appears abnormal in people with schizophrenia during performance of working memory tasks (Anticevic, Repovs, & Barch, 2013; Galletly, Clark, McFarlane, & Weber, 2001; Metzak et al., 2012).

Working Memory in PTSD

It has been suggested that a key disturbance of environmental processing in PTSD arises due to continuous background re-processing of traumatic events, resulting in modifications of neural circuits (McFarlane, Yehuda, & Clark, 2002; Moores et al., 2008). The resources required to maintain these autonomous loops may therefore not be available for general attention and memory. Working memory capability has been shown to be decreased in those individuals who experience intrusive memories, indicating that a proportion of finite working memory resources is required during re-experiencing, leaving fewer resources available for updating online content (Hellawell & Brewin, 2002). Working memory capacity has been shown to be directly related to the severity of intrusive memories (Brewin & Smart, 2005), providing further empirical support for this theory.

Comparing Working Memory in Schizophrenia and PTSD

Duke et al. (2010) found that working memory impairment was greater in people with schizophrenia, with or without PTSD, than in people with PTSD only and controls. The latter two groups were not significantly different. Our own work (Galletly, McFarlane, & Clark, 2008) compared working memory in people with treatment-resistant schizophrenia, people with PTSD, and controls. Subjects with substance abuse or dependence were excluded and the three groups were matched for age, gender, and years of education. We utilized event-related potentials (ERPs), as these provide millisecond-level resolution of activity related to the processing of very simple stimuli. Our task utilized auditory tone stimuli and required subjects to respond if two identical tones were heard. This meant that each tone had to be held in working memory, ready for comparison with the next tone. We found that target detection was most accurate for controls, followed by subjects with PTSD, while those with schizophrenia had the worst performance.

Overall, there was greater impairment in information processing in people with schizophrenia than people with PTSD or controls. The N1 component of an ERP assessment reflects allocation of attention, initial evaluation of the physical characteristics of the stimulus, and formation of an accurate internal representation. N1 amplitude was reduced in schizophrenia but was normal in PTSD, indicating that very early processing was impaired only in schizophrenia.

The amplitudes of the P2 component, which reflects the early stages of attending to and processing the stimulus, and the N2 component, which reflects recognition of the nature and significance of the stimulus, were reduced in schizophrenia and enhanced in PTSD, suggesting differences in selective attention and stimulus encoding. People with

PTSD seemed to be making additional effort to determine the nature of the stimulus, in comparison to people with schizophrenia.

The processes reflected by the non-target P3 include the updating of working memory with the features of the new stimulus, the maintenance of the new internal representation, and context updating with factors such as subjective probability. Both clinical groups had reduced non-target P3 amplitudes, but the degree of amplitude reduction was greater in the schizophrenia group than the PTSD group, indicating less activity related to updating working memory in schizophrenia. The target P3 is related to decision making about the nature of the stimulus, which may include initiation of a response. Both the PTSD and schizophrenia groups showed a reduction in target P3 amplitude, but the reduction was greatest in the PTSD group indicating a relatively greater reduction in activity associated with executive functions related to target detection and response initiation.

Following the P3, both groups had an increase in frontal negative activity in relation to updating and consolidation processes in the non-target condition. However, only the PTSD group showed an increase in frontal negative activity during late processing of target stimuli. This suggests that those with PTSD have abnormalities in complex cognitive processes such as context updating and task closure. The PTSD group showed an increase in activity in target late slow waves, which is related to the updating of working memory, concept learning, the acquisition of rules, and the retrieval of concepts from long-term memory. In summary, the PTSD group had enhanced P2, N2, and late slow wave activity, but reduced P3 amplitude. This abnormal pattern of activity suggests that people with PTSD make additional effort in some aspects of information processing, despite reduced capacity to categorize and respond to the stimulus.

These findings are consistent with separate studies of schizophrenia and PTSD. Studies in schizophrenia have found reduced amplitude of the N1 (Williams, Gordon, Wright, & Bahramali, 2000), P2 (McCarley, Faux, Shenton, Nestor, & Adams, 1991), N2 (O'Donnell et al., 1993), and P3 (Bramon et al., 2005). Reduction in P3 is one of the most robust biological abnormalities in schizophrenia and is also found in high-risk populations and first degree relatives of people with schizophrenia (Bramon et al., 2005). It has been proposed that P3 amplitude reduction is an endophenotype linked to genetic vulnerability for schizophrenia (Turetsky et al., 2014).

In PTSD, there are significant differences between responses to trauma-related stimuli compared to neutral stimuli. N1 and P3 amplitudes are increased during the processing of trauma-related stimuli (Attias, Bleich, Furman, & Zinger, 1996), suggesting greater allocation of attention and processing resources. In contrast, there is a reduction in P3 amplitude to non-traumatic stimuli in PTSD (Karl, Malta, & Maercker, 2006).

Our results show that while the most commonly reported ERP abnormality, reduced P3 amplitude to a simple detection task, is similar in schizophrenia and PTSD, the nature of the underlying cognitive processes differ between the two disorders. People with schizophrenia appear to have more difficulty correctly identifying targets than people with PTSD. Schizophrenia, but not PTSD, is associated with a reduction in N1 amplitude, indicating impairment in the early, pre-conscious apprehension of stimulus characteristics. People with schizophrenia tend to have normal or reduced ERP activity as they undertake simple target detection tasks, while people with PTSD manifest ERP patterns of both enhanced and reduced activity. It has been suggested that these increases in activity reflect the increased arousal and vigilance characteristic of PTSD.

Autobiographical Memory

Overview

Autobiographical memory includes both personal semantic memory (facts about oneself) and episodic memory (such as recall of specific events). It is considered important in maintaining a sense of identity and developing and maintaining social relationships. Autobiographical memory has been modelled as a three-tiered self-memory system consisting of lifetime periods, general events, and event-specific knowledge that consist of the specific event, imagery, and sensory details of a memory (Conway, Collins, Gathercole, & Anderson, 1996). Generally, the assessment of autobiographical memories relies on a cue word test, most commonly the Autobiographical Memory Test (AMT; Robinson, 1976), where participants are presented with cue cards with single words (safe, good, etc.) and asked to recall a specific memory. Memories are coded as specific (*I saw a shark for the first time at the beach on Saturday*), which reflect unique occurrences; categorical (*I have seen sharks at the beach*) for any repeated events; or extended (*The beach was particularly busy in the summer of 2009*), which occur over long periods of time (King et al., 2010). A common deficit in people with schizophrenia and PTSD is the inability to access specific memories in sufficient detail, termed *overgenerality*. These memories are not specific to time or place or repeated events, for example; 'When I was younger I had tennis training every weekend' compared to 'Last summer, my father took me to watch the Boxing Day test at the Melbourne Cricket Ground.'

Autobiographical Memory in Schizophrenia

Autobiographical memory in people with schizophrenia can be characterized by overgenerality or impaired specificity of autobiographical memories compared to the normal population (Riutort, Cuervo, & Canion, 2003). Furthermore, recollection of autobiographical memories in schizophrenia tends to rely heavily on the emotional content of the memories as opposed to content-related or sensory-perceptive characteristics of the specific memories (Morise, Berna, & Danion, 2011). Harrison and Fowler (2004) suggest that the emotional content of autobiographical memories improves salience and retrievability. People with negative symptoms of schizophrenia such as flat affect and poor capacity for forming social relationships tend not to express emotional content when describing autobiographical events. Negative symptoms have been shown to be associated with avoiding traumatic memories of psychotic symptoms and impaired retrieval of specific autobiographical memories, resulting in an overgeneralization of memories regarding personal history (Harrison & Fowler, 2004).

Our current understanding of how autobiographical memory operates in people with schizophrenia is relatively limited. Potential confounding factors include symptom severity, delusional beliefs about the past, and the presence of comorbid major depressive disorder which also is known to moderate autobiographical memory performance (King et al., 2010).

Autobiographical Memory and PTSD

In general, people with PTSD tend to recall autobiographical memories with decreased episode specificity (Sutherland & Bryant, 2007). Consistently, the present literature reports that people with PTSD retrieve less specific autobiographical memories than the normal population, producing overgeneralized memories. Williams et al. (2007)

propose that overgeneralized retrieval may reflect a defensive reaction to avoid specific memories of trauma so as to reduce adverse effect. In this way, people with PTSD tend to recall categorical information (*Christmas Day*) rather than unique moments within this event. However, Rubin explored personal narratives of people with PTSD and compared them with a control group who had not experienced severe trauma and found there were no significant between-group differences in terms of detail and coherency (Rubin, 2011). The presence of PTSD negatively affects retrieval of a broad range of autobiographical memories, including memories obtained by word cues, and other forms of free recall, such as the participant's most-stressful, most-positive, and most-important memories (Moore & Zoellner, 2007). Traumatic experiences tend to be recalled both voluntarily and involuntarily with greater emotional intensity than non-traumatic experiences (Rubin, Dennis, & Beckham, 2011).

Exposure to certain types of therapy may affect how autobiographical memories are stored and retrieved for individuals with PTSD. A pilot study by Sutherland and Bryant (2007) concluded that symptom reduction during treatment for PTSD led to greater access to specific memories of non-traumatic, positive experiences. A review of a number of studies suggested that post-traumatic symptoms rather than trauma exposure are associated with overgenerality (Moore & Zoellner, 2007).

Comparing Autobiographical Memory in Schizophrenia and PTSD

To date, there have been no studies which have directly compared the similarities and differences of autobiographical memory in people with schizophrenia and PTSD, although it appears that both schizophrenia and PTSD are associated with overgeneral autobiographical memories and reduced episode specificity. As suggested by Williams et al. (2007), an inability or reluctance to recall specific details about a personal event may act as a defence mechanism in both clinical populations. However, some conclusions drawn from the schizophrenia population are difficult to interpret because the presence of delusions may at times make it difficult to determine whether apparent recollections are accurate memories. Moreover, studies in these clinical populations which aim to explore autobiographical memory often do not include measurement of symptom severity, which may be a potential confound.

Further research is warranted in this area. Other factors that may need to be taken into account include the person's lifetime exposure to trauma, the kinds of therapy they may have been exposed to which may have altered their ability to recall events (such as cognitive restructuring), a ruminative cognitive style, and the extent to which they have repeatedly retold the narrative of the trauma.

Conclusion

There is a complex pattern of interconnection between schizophrenia and PTSD. Trauma can contribute to the aetiology of both disorders, suggesting some commonalities in the biological pathways leading to these conditions. While comparisons between the two conditions are limited by various potential confounds described above, overall it appears that cognitive impairment, including difficulties with memory, is greater in schizophrenia than in PTSD.

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18

Cognitive Perspectives on Dissociation and Psychosis

Differences in the Processing of Threat?

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Threat mobilizes cognitive processes. In animal models threat is generally conceptualized as an external, predatory force impinging on the organism and producing an organized array of physical defensive responses during pre-encounter (e.g. *heightened vigilance*), post-encounter (e.g. *freezing*), circa-strike (e.g. *fight*), and post-strike (e.g. *submission*) phases (Rau & Fanselow, 2007). These different stages of physical defence are present in human beings as well (Blanchard, Hynd, Minke, Minemoto, & Blanchard, 2001; Van der Hart, Nijenhuis, & Steele, 2006) and have cognitive concomitants, which are most evident in phases before and after the behaviourally dominant circa-strike response. For example, the pre-encounter defence is characterized by heightened attention (hypervigilance); orientation and attentional fixation are part of the post-encounter (freezing) response, and mental defeat (Ehlers et al., 1998) may cognitively define the post-strike defence. Importantly, in human beings threat is not limited to environmental agents but also can be generated by internal stimuli (Lang, Davis, & Ohman, 2000). From the earliest stages of psychological development, impulses, affects, sensations, perceptions, and fantasies may be experienced as threatening (Klein, 1935); frightening cognitions in the form of explicit, episodic memories only come later, a consequence of cerebral development (Johnson, 1994). Traumatizing events seem particularly significant in the creation of threatening cognitions, such as intrusive post-traumatic memories and incapacitating beliefs regarding perceived danger (Ehlers & Clark, 2000). Thus, cognitions themselves may act as an *internal* source of threat, triggering anxiety, heightened vigilance, and sustained attentional orientation even in the absence of current external threat.

In this chapter we focus on the cognitive processing of perceived or actual threat, and examine the degree to which current findings converge and diverge in the dissociation and psychosis literatures. Phenomenologically, both dissociative and psychotic experiences are characterized by the presence of frightening memories, thoughts, and beliefs (Green & Phillips, 2004; Van der Hart et al., 2006). Regardless of the true extent of threat in the environment, a terrifying internal world renders the external world unsafe and dangerous. Internally and externally derived perceptions of threat may be reinforced in individuals with dissociative and psychotic disorders by cognitive biases. However, cognitive research on threat processing has often taken different approaches in the fields of dissociation and psychosis.

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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Cognitive experimental work in psychosis has tended to focus on specific *symptoms* as a state or an outcome of abnormal threat-related cognitive processes. Particular emphasis has been given to paranoid delusions. By contrast, dissociation has not been viewed as an outcome of cognitive processing anomalies, but as a *process* in itself that reduces the impact of threat. Dissociation research in the main has thus attempted to examine what cognitive processes are associated with, or assist, this threat-management process. This follows from the view that dissociation is both a process (i.e. failed psychobiological integration) and an outcome (i.e. a set of symptoms derived from the process of dissociation). While experimental samples are usually based on dissociative outcomes (i.e. dissociative experiences/symptoms), the conceptual focus of research has generally been on the putative dissociative process which gives rise to them. Thus, in essence, the overarching question typically asked by dissociation researchers is, 'What cognitive mechanism are associated with the process of dissociation?', while the question typically asked by psychosis researchers is, 'What cognitive mechanisms underlie, or lead to, psychotic symptoms?'

Trauma and Threat in Dissociative and Psychotic Individuals

The empirical association between trauma and dissociation (Briere & Runtz, 1988; Chu & Dill, 1990; Irwin, 1994), and the proposed aetiologically significant role of trauma in many instances of severe dissociation (Dorahy, Middleton, Seager, Williams, & Chambers, 2016; Middleton & Butler, 1998; Putnam, Guroff, Silberman, Burban, & Post, 1986), suggests that the majority of dissociative individuals have experienced significant environmental threats in their lifetime (e.g. Dalenberg et al., 2012). Fear of environmental stimuli (e.g. being outside home, in crowds) and further persecution from others is common in those seeking treatment for dissociative problems (Kluft, 1990). A young woman with dissociative identity disorder (DID) seen by one of the authors described how mentally exhausting it was for her to leave her home and go to the supermarket. The activation and generalization of memories of past assaults rendered other people dangerous and potentially threatening. Her attention to threat could remain relatively focused in more confined environments with only one or a small number of people (e.g. a therapy session). However, in a supermarket, potential threat was perceived as all around and was difficult to detect. She therefore remained fearful and hypervigilant during the whole time she was shopping.

The internal world of dissociative individuals is often described as containing an organized separation of threatening and non-threatening mental contents (e.g. Putnam, 1989; Ross, 1989). Van der Hart et al. (2006) have described dissociation as a structured separation of a part (or parts) of the personality that remains over-identified with, and psychobiologically connected to, past traumatic experiences, from a part (or parts) of the personality that is under-identified with, and psychobiologically disconnected from, past traumatic experiences (see also Steele, Boon, & Van der Hart, 2017). The psychodynamics of these organized psychobiological structures are such that the content of the overidentified trauma part(s) is highly threatening to those part(s) under-identified with the trauma, which leads to phobic avoidance, an important pathology development and maintaining factor (Van der Hart et al., 2006).

In contrast to psychological conceptualizations of dissociation, traditional views of psychosis have interpreted evidence for abnormal structure and function of frontal,

subcortical limbic, and medial temporal brain regions as indicating a disease of biological origin rather than as the result of exposure to traumatic events. Yet a growing literature implicates traumatic experiences as a possible aetiological pathway to psychosis (see Arseneault et al., 2011; Braehler et al., 2013; and Chapter 9 in this book), with actual threat during early life potentially influencing neurodevelopment and limbic system functions associated with psychosis (Read, Fosse, Moskowitz, & Perry, 2014; Read, Perry, Moskowitz, & Connolly, 2001). The degree to which trauma influences the psychodynamics and neurobiology of psychotic experience remains to be clarified.

Studies exploring the relationship between threat and cognition in dissociation and psychosis have examined the functioning of putative cognitive processes in response to external threat cues. Broadly, these studies can be divided into two groups: (i) those examining encoding and retrieval (memory) processes and (ii) those examining attention and working memory processes (including studies focusing on cognitive inhibition). The study of memory processes in psychosis provides convergent evidence of memory impairments that reflect biased recall of material associated with personal threat, and which may lead to long-term expectancy biases regarding the future experience of negative and personally threatening life events (Bentall, Kaney, & Bowen-Jones, 1995; Kaney, Bowen-Jones, Dewey, & Bentall, 1997). Such biases may underpin paranoid anxiety in psychosis. In contrast, the study of memory processes in dissociative disorders has been largely focused on amnesia between identities (i.e. 'inter-identity amnesia') and information transfer across amnesic identities in DID (e.g. Elzinga, Phaf, Ardon, & Van Dyck, 2003; Huntjens et al., 2005; Kong, Allen, & Glisky, 2008; for reviews see Allen & Iacono, 2001; Dorahy, 2001). Preliminary research suggests that emotional content per se (i.e. objective threat rating) may have less influence on retrieval failure across amnestic identities than the higher order associations and details that accompany or bind the stimulus during encoding (e.g. the cognition 'I'm going to die, lose control, or be overwhelmed' during a traumatic event).

While encoding and retrieval studies in dissociation and psychosis have produced intriguing results, it is the attention and working memory studies which provide the most fruitful basis for comparison between the disorders, and as such we will focus on these studies in the remainder of this chapter. Cognitive inhibition is generally regarded as an important mechanism for selective attention as it is proposed to prevent irrelevant, distracting information from entering consciousness, so that relevant information can be focused upon. As it has been systematically studied in both dissociation and psychosis, it will be examined separately from other research on attention and working memory.

Attention and Working Memory

Studies on Dissociation and Dissociative Disorders

Clinicians have long noted alterations in attention associated with dissociation. Following Prince's (1929) seminal efforts, Stringer and Cooley (1994) emphasized attention as an important area of investigation for dissociation researchers. They assessed a young DID woman with selective and divided attention tasks, reasoning that selective attention ability (assessed with a digit span task) would display superior performance

than divided attention ability (simultaneous reading and listening memory task) when administered to one identity. However, it was further predicted that when two identities capable of mutual awareness (co-consciousness) each focused on a different aspect (i.e. reading or listening) of the divided attention task, performance would be improved compared to the single identity's dual task performance. These hypotheses were supported and suggest that attentional capacity in DID may be increased if dissociative identities can process different aspects of complex environmental tasks (i.e. different streams of consciousness processing different information).

Subsequently, DePrince and Freyd built on this finding, by espousing the view that non-clinical individuals with high dissociative capacities will more easily deal with divided attention tasks than low dissociators. They suggest that high dissociative capacity creates a 'cognitive environment' where multiple streams of information can be more easily processed (DePrince & Freyd, 1999, 2004). Their research findings have supported this view, showing a processing advantage for high dissociators over low dissociators when engaged in dual attention tasks, but a disadvantage when selective attention tasks are administered (DePrince & Freyd, 1999, 2001; but c.f. Giesbrecht & Merckelbach, 2009; and c.f. Bremner, 2010; Giesbrecht, Lynn, Lilienfeld, & Merckelbach, 2008). In extending these findings to a clinical cohort, Simeon, Knutelska, and Putnam (2005) reported less interference compared to comparison groups in a dissociative disorder sample (N = 46, primarily depersonalization disorder) for neutral, dissociation, and threat words during a divided attention task (modified Emotional Stroop).

In further support of superior divided attention abilities in high dissociators, De Ruiter, Phaf, Veltman, Kok, and Van Dyck (2003) found that target responding (i.e. indicating the presence or absence of the letter 'A') in non-clinical participants with elevated scores on the Dissociation Questionnaire (Vanderlinden, Van Dyck, Vandereycken, Vertommen, & Verkes, 1993) was less affected by 'difficult to ignore' distractor information than was the target responding of low dissociators. Thus, high dissociators were better able to ignore or inhibit *task-irrelevant* information than low dissociators. Further, when the stimuli to be ignored were threatening words, high dissociators were not only drawn to the threat words more quickly but also responded faster to the presence of the target stimuli, compared to those with low levels of dissociation. These findings suggest that although threat captured the attention of high dissociators, they were still able to respond with superior speed to the non-threat target stimuli, indicating the capacity to simultaneously process on both 'deep' (the affective meaning of the word – neutral or negative) and 'shallow' (the presence of the letter 'A') levels (De Ruiter, Elzinga, & Phaf, 2006). De Ruiter and colleagues also report empirical evidence linking dissociation with enhanced working memory (WM) capacity and attentional ability (De Ruiter, Phaf, Elzinga, & Van Dyck, 2004; Veltman et al., 2005; see De Ruiter et al., 2006, for review). That is, high dissociators not only perform better under greater task load, but also show evidence of better WM efficiency (Veltman et al., 2005). In high dissociators, increased WM capacity allows greater WM content and co-varies with heightened WM processes, including attentional capability, thereby providing the foundation for superior divided attention ability.

The divided attention advantage may prevent threatening information from reaching conscious awareness in high dissociators (DePrince & Freyd, 2004; Simeon et al., 2005). Indeed, De Ruiter et al. (2003) have proposed that threat stimuli, which are quickly detected and automatically processed (Lang et al., 2000), trigger the division of attention

in high non-clinical dissociators. In this way, divided attention represents a means of managing threatening information, by allowing the painful affect associated with threat to be avoided. Dorahy (2006) has extended these ideas to propose that the early perceived or actual detection of threatening material activates a cognitive operating system that allows high dissociators to process multiple streams of information, some threat-related, others non-threat-related. The extent to which dissociative individuals can keep their awareness away from threat stimuli will limit their psychologically vulnerability during its processing. Chui, Yeh, Huang, Wu, and Chui (2009) found empirical support for the notion that divided attention in high dissociators is the product of a superior ability to shift attention (see also Chui, Lin, Yeh, & Hwu, 2012). Thus, attention can be rapidly directed away from or between different processing streams, assisting effective divided attention processing and allowing rapid movement away from threat streams.

While divided attention may offer some psychological protection against threat, this strategy also has the potential to create ongoing difficulties following processing, especially with reference to intrusions (Brewin & Saunders, 2001). In a series of studies, Holmes, Brewin, and Hennessy (2004) exposed non-clinical volunteers to a highly aversive short film while they engaged in tasks designed to increase either verbal (conceptual) processing of the film or sensory (perceptual) processing. In the tasks that heightened *conceptual* processing of the film, perceptual processing was reduced by having participants tap a sequence of keys. In the tasks favouring *perceptual* processing, conceptual processing was reduced by having participants count back in threes from 958 while watching the film. These manipulations revealed that divided attention tasks that increased *verbal and higher-order conceptual processing* of threat stimuli *reduced* subsequent intrusions (Holmes et al., 2004, studies 1 and 2; see Brewin, 2014; Brewin, Dalgleish, & Joseph, 1996 and Brewin, Gregory, Lipton, & Burgess, 2010 for the theoretical foundations of this work). However, divided attention tasks that lowered higher-order verbal processing of threat but increased *sensory and lower-order perceptual processing* produced *increased* subsequent intrusions (study 3). Interestingly, in divided attention tasks designed to reduce the amount of lower-order (sensory) processing, and which produced fewer intrusions, self-reported spontaneous dissociation at the time of threat stimuli exposure was related to increased later intrusions (e.g. Dorahy, Peck, & Huntjens, 2016). This led to the suggestion that dissociation may disrupt higher-order (verbal) conceptual processing (Lyttle, Dorahy, Hanna, & Huntjens, 2010). In summary, high dissociators may use divided attention to protect against threat by directing awareness to less-threatening streams of information. However, this ability, when activated *during* threat processing, may heighten *perceptual* processing at the cost of *conceptual* processing, creating the cognitive context for subsequent symptoms such as intrusions (Huntjens, Dorahy, & Van Wees, 2013).

Studies on Psychosis and Psychotic Disorders

Biased attention toward threatening information has been demonstrated in schizophrenia at levels of both pre-attentive processing (automatic; not requiring attentional resources) and controlled processing (i.e. drawing on executive resources to direct attention), using a range of experimental paradigms. In particular, enhanced pre-attentive detection of threat and the subsequent inability to disengage attention from threat-related information has been proposed to underpin the development of paranoid

ideation and persecutory delusions (Green & Phillips, 2004). Evidence for eye movement and attentional bias *toward* threat comes from eye movement studies and electrophysiological orienting responses to threat stimuli (e.g. Green, Williams, & Davidson, 2001; Tso et al., 2015). Such a bias is also evident in studies where perception of threat is elicited in the absence of threatening stimuli (i.e. the perception of threat where none exists; Henry, Von Hippel, Ruffman, Perry, & Rendell, 2010; Kring, Siegel, & Barrett, 2014; Phillips, Senior, & David, 2000). There is also evidence of overt *avoidance* of threatening information during later information processing in psychotic individuals (e.g. Jang, Kim, Kim, Lee, & Choi, 2016). Recent evidence also suggests that biased fear processing may be moderated by attentional control mechanisms (Prochwicz & Klosowska, 2017a, 2017b), facilitating ongoing anticipation of threat with consequences for behaviours and beliefs akin to processes implicated in social phobia (Mogg & Bradley, 2016).

Preferential attention to threat-related words (along with other negative emotional or delusion-related words) among paranoid and psychosis-prone individuals was first demonstrated in several studies employing emotional variations of the original Stroop (1935) task (Williams, Mathews, & MacLeod, 1996). In the common version of this task, the length of time to name the ink colour of a colour-word (e.g. verbally responding 'green' to the word RED written in green ink) is used as an index of the ability to ignore the semantic content produced by the automatic reading of the word which occurs at a preconscious level of awareness; longer response latencies thus correspond to a failure to ignore the word name (distractor) in order to say the ink colour (target). Some investigations using adapted versions of this task have employed words reflecting threatening or delusional themes (rather than colour words) to investigate pre-attentive processing of content-specific material in psychosis. Using this paradigm, schizophrenia patients with persecutory delusions are slower in naming the ink-colour of 'paranoid' or threat-related words versus meaningless strings of the letter 'O', neutral words, or words signifying negative affect, compared with depressed and non-clinical controls (Bentall & Kaney, 1989). This finding has been replicated in a group of patients with delusional disorder (Fear, Sharp, & Healy, 1996) and in manic bipolar disorder patients (Lyon, Startup, & Bentall, 1999). More recent studies suggest that this bias may be moderated by attention to self versus others (Greer, Smaioes, Spencer, Freeston, & Dudley, 2016), and neural aberration in prefrontal regions has been associated with inhibition of negatively valenced words in schizophrenia (Vercammen et al., 2012). At least one study has failed to replicate emotion-specific biases in attention among schizophrenia patients using a variation of this task (Demily et al., 2010).

Heightened pre-attentive processing of threatening *faces* has also been demonstrated in psychosis-prone[1] individuals using a modified dot-probe task (Arguedas, Green, Langdon, & Coltheart, 2005). Delusion-prone individuals responded faster to dots presented in the *same* location as angry faces, compared to happy faces, when displayed at all latencies (between 200 and 1250 ms). Yet, these same participants were slower to respond to dots presented in *different* spatial locations to angry (versus happy) faces at the two longer presentation latencies (i.e. 500 and 1250 ms). These findings suggest preferential engagement toward, and slow or decelerated disengagement from, threat-related facial expressions (i.e. anger) in delusion-prone individuals. Consistent with this finding, decelerated disengagement from threat-related faces in delusion-prone individuals was also demonstrated in a previous study reporting significantly *slower*

reaction times to identify angry faces, reflecting a lack of the processing advantage shown by healthy control subjects (Green et al., 2001). In this study, the delayed processing of angry faces in relation to delusional ideation was interpreted as a prolonged, *conscious* evaluation of threat. Such extended processing of threat may plausibly result in deeper encoding of threat-related information in long-term memory stores, coinciding with heightened recall of threatening material and a higher expectation of negative events in delusional individuals (e.g. paranoid schizophrenia; Bentall et al., 1995, 2009; Kaney, Wolfenden, Dewey, & Bentall, 1992). Taken together, these reaction time findings of *faster* processing of threatening material at pre-attentive levels of awareness alongside *slower* disengagement from threat during conscious evaluation are consistent with increased salience of threat for psychosis-prone individuals at both pre-conscious and conscious stages of processing.

Attentional biases for threatening stimuli in psychotic and psychosis-prone individuals have also been demonstrated during later stages of information processing using visual scanpaths as an objective measure of controlled attention (Green, Williams, & Hemsley, 2000). Visual scanpaths involve voluntary eye movements (saccades) and foveal fixations to salient information, and represent a psychophysiological measure of visual attention. These studies reveal aberrant visual attention to social threat which reflects an overt *avoidance* of fixating upon threatening information (Green & Phillips, 2004). Specifically, delusion-prone individuals fixate less often on angry and fearful faces than do non-delusion-prone participants (Green, Williams, & Davidson, 2003a). Another study replicated these results in schizophrenia patients (Jang et al., 2016), and several recent studies demonstrated moderating effects of attentional control mechanisms in threat-biases related to anxiety and delusional ideation (Prochwicz & Klosowska, 2017a, 2017b). Similarly, schizophrenia patients with predominant persecutory delusions spend less time looking at the *facial features* (i.e. eyes, nose, and mouth) of negative expressions (anger, sadness) compared to healthy controls (Green, Williams, & Davidson, 2003b), and show significantly fewer fixations to expressions of fear compared to non-deluded schizophrenia patients. These findings suggest that facial feature areas such as the eyes may be particularly threatening for paranoid individuals and reflect a controlled attentional bias *away* from threat.

Other studies have used complex stimuli comprising photographs of social scenes depicting various degrees of threat (e.g. Freeman, Garety, & Phillips, 2000; Henry et al., 2010; Phillips et al., 2000) or other ambiguous perceptual stimuli (e.g. Colbert, Peters, & Garety, 2010) to assess data-gathering biases for threatening information. For example, Freeman et al. (2000) had participants view images containing 'direct', 'potential', and 'hidden' threat, as well as happy scenes; both the 'direct' and 'hidden' threat scenes had singular pieces of threatening information that were distinct from non-threat points of interest, but these scenes differed in that the threatening area was not immediately apparent in the 'hidden' threat scenes. In contrast, the 'potential' threat depicted ambiguous scenes with no obvious singular area of threat. In this study, patients with persecutory delusions looked less often at 'happy' and 'potentially threatening' scenes, compared to scenes depicting 'direct' and 'hidden' threat (which were viewed at similar levels to controls).

In the study by Phillips et al. (2000), participants viewed social situations rated as neutral, ambiguous, or overtly threatening. All subjects looked at the overtly threatening scene more than an ambiguous (potentially threatening) scene. However, in comparison with normal and psychiatric controls, persecutory deluded patients looked

more often (and for longer periods of time) at the non-threatening areas of the ambiguous scene, and *less often* at the threatening areas of that scene and at the threatening foreground areas of all the scenes. These findings suggest that persecutory delusions may arise from the perception of threat in inappropriate places within ambiguous contexts. Importantly, these findings do not support a direct association between persecutory delusions and increased extended attention to threat (as suggested by earlier studies of pre-attentive cognitive bias). In summary, visual scanpath studies show that deluded schizophrenia patients pay comparatively *less* attention to: (i) the salient features of threat-related faces and (ii) the threatening areas of social scenes. Other investigations of perceptual biases in the detection of threat stimuli have shown that deluded individuals use less information to make a decision about the threat value of a stimulus, consistent with the style of 'jumping to conclusions' considered characteristic of paranoid patients (Colbert et al., 2010). Freeman et al. (2013) showed that current paranoid thinking is associated with greater anticipation of threat events and negative interpretations of ambiguous events, self-focused cognitive style, and negative ideas about the self.

These findings are consistent with the operation of a 'vigilance-avoidance' style of threat processing in psychotic individuals (Green & Phillips, 2004). Within this model, the controlled attentional bias *away* from threat-related material during *later* stages of processing is proposed as a strategy to reduce the unpleasant anxiety associated with the early, *automatic* perception of a socially threatening stimulus. This hypothesis has been raised previously in cognitive models of the aetiology and maintenance of anxiety (Mathews, 1990). In this context, initial orienting of attention *toward* threat-related stimuli reflects automatic information processing *priorities* which are biased toward the detection of threat, followed by active *avoidance* of threat (during later controlled stages of attention) to reduce associated anxiety. This pattern of attention for threat-related stimuli thus encompasses both a pre-attentive orienting bias for threat-related information that *may extend* to difficulty disengaging threatening material from conscious awareness (such that threatening information is subject to further cognitive processing), followed by active avoidance of overtly threatening information during subsequent controlled attentional processes, as demonstrated in the studies reviewed above. As shown by Phillips et al. (2000), however, avoidance of threat cues in the later, controlled stages of processing may be associated with delusional individuals perceiving threat in areas where it does not exist – heightening paranoid anxiety. This effect may be produced by a failure to extinguish the early, automatic activation of threat processing even after attention is turned away from threat cues. In considering these findings together, it seems likely that the genesis of paranoid delusions involves biased attention toward internally or externally perceived threat (perhaps despite a lack of any 'actual' threat), directly followed by the concomitant cognitive phenomenon of avoiding attentional fixation upon threat.

With regard to the reality of perceived threat in relation to attentional biases in psychosis, it is worth noting the findings of several recent studies of contextual effects on threat perception in paranoid individuals. The studies demonstrate a lack of influence of social context on the perception of threat, in both clinically paranoid individuals (Green, Waldron, & Coltheart, 2007; Green, Waldron, Simpson, & Coltheart, 2008) and those with sub-clinical levels of trait paranoia (Collip et al., 2011). In particular, Green and colleagues showed that social contextual information was less visually attended to (Green et al., 2008), and also less influential when making judgments about threatening social material (Green et al., 2007). Further corroborative evidence comes from a recent study using experience-sampling methods to gauge changes in perceived threat over

time in apparently healthy individuals assessed for paranoid tendencies (Collip et al., 2011). At each occasion of experience sampling, the participants were asked to record whether they were alone and, if not, whether they were in the company of familiar or unfamiliar people. This allowed the investigators to assess the effect of social company on momentary levels of paranoia and perceived social threat. The researchers found that individuals with low and medium levels of trait paranoia experienced greater perceived *social threat* when in less familiar company; additionally, the mid-level paranoia group reported *more* paranoia in less familiar company. In contrast, for those in the high paranoia group, social context did not affect the perception of social threat or momentary paranoia. These findings suggest that paranoia is context dependent in individuals with low and medium levels of trait paranoia but that context-dependent perceptual biases are not so important for those at the highest levels of trait paranoia. That is, for individuals with high levels of trait paranoia, the experience of paranoia and the perception of social threat were independent of the familiarity of the social context (Collip et al., 2011). Accordingly, 'threat' would become seemingly pervasive and inescapable for these individuals. Interestingly, a similar proposal emphasizing the importance of context-independence for the development of depersonalization disorder was suggested by Phillips and colleagues (2001), highlighting a potential point of convergence between psychosis and dissociation that deserves further empirical attention. Convergent evidence from other paradigms suggests that emotion-processing abnormalities in schizophrenia reflect aberrant contextual processing and integration of information during later stages of information processing (Kring et al., 2014; Shasteen et al., 2016).

In light of the significant association between traumatic events, including child abuse, and psychosis (e.g. Read, Van Os, Morrison, & Ross, 2005; Spence et al., 2006; Chapter 9 in this book), one direction for future work is to explore the developmental pathway to the pattern of attentional bias in delusional individuals. A study using the Emotional Stroop has shown slower response times for, and greater recall of, sexual abuse-related words in a subsample of individuals with schizophrenia who had a sexual abuse history, compared to those who reported only physical abuse or denied experiencing childhood abuse (Klewchuk, McCusker, Mulholland, & Shannon, 2007). This study indicates that residual but still active abuse schemas may provide a basis for the 'vigilance-avoidance' pattern of attention to threat in paranoid psychosis. While recent neuroimaging research in psychosis highlights associations between early childhood trauma exposure and brain activity during cognitive inhibition (Quidé, Watkeys, O'Reilly, Carr, & Green, 2017) and social processing tasks (Quidé, Ong, et al., 2017), the specific mechanisms by which trauma impacts brain functioning remains unclear.

Cognitive Inhibition in Psychosis and Dissociation

Cognitive inhibition generally refers to a mechanism that assists the selection of specific target stimuli by reducing the impact of competing and irrelevant stimuli (Tipper, 1985) and as such is central to selective attention (Kane, May, Hasher, Tamara, & Stoltfus, 1997; Tipper, Bourque, Anderson, & Brehaut, 1989). It is one of the few cognitive variables to be systematically assessed in both psychosis and dissociation populations and is therefore considered carefully here.

The development of cognitive models of memory and attention in the mid-twentieth century (Broadbent, 1958) heralded the opportunity to explain psychotic symptoms by

means of cognitive processes (Cromwell, 1968). Frith's (1979) proposal that psychotic symptoms could be explained via cognitive mechanisms of selective attention led to rigorous experimental investigations of these processes. Specifically, Frith argued that the core positive symptoms of schizophrenia could be explained by difficulties in the inhibition of preconscious content. Typically, numerous environmental stimuli impinge on the senses at any one time, evoking a wide array of interpretations and understandings that are entertained and evaluated at an early, automatic stage of processing, below the level of consciousness. A limited amount of this vast sensory information reaches awareness and the cognitive interpretation which best fits this information is shunted to consciousness to allow the individual to make sense of the material. Frith (1979) argues that in psychosis the inhibitory mechanisms that keep most sensory stimuli and alternative and irrelevant preconscious content away from awareness are defective. Consequently, in Frith's (1979) words, the patient 'becomes aware of ambiguous and multiple interpretations of events and finds it difficult to select and carry through an appropriate course of action' (p. 228). The failure to inhibit irrelevant sensory stimuli and preconscious hypotheses about the meaning of those stimuli can lead to several confusing interpretations of an unrestricted amount of auditory information which may be experienced as auditory hallucinations. This model is limited to the production of auditory hallucinations and does not account for other phenomenological characteristics, such as location and intensity. From Frith's model, delusions come about from an erroneous attempt to explain the multiple interpretations that become conscious due to a failure to inhibit the incorrect, irrelevant ones (e.g. 'my mind must be controlled by others').

By operationally defining cognitive inhibition as the ability to demonstrate negative priming (Tipper, 1985), experimental work has typically supported Frith's thesis and found a general reduced capacity for cognitive inhibition in schizophrenia and those with high schizotypy scores (i.e. psychosis-prone individuals; Beech & Claridge, 1987; Beech, Baylis, Smithson, & Claridge, 1989; Fuller, Frith, & Jahanshahi, 2000; Ungar, Nestor, Niznikiewicz, Wible, & Kubicki, 2010; see Williams & Beech, 1997, for review). Negative priming refers to the processing disadvantage in time or accuracy evident when responding to a target stimulus that was ignored in the previous trial (Tipper, 1985). One technique for assessing negative priming is the flanker task (Eriksen, 1995; Eriksen & Eriksen, 1974). In the flanker task, participants respond verbally to the middle (target) stimulus flanked by two identical distractors (e.g. 2 6 2). The critical trial sequence for assessing negative priming involves a target stimulus that is identical to the prior trial *distractor* stimulus (e.g. 6 4 6 followed by 2 6 2). Evidence of effective negative priming typically consists of slower or less accurate responses to target stimuli in the second trial, compared to responses where target stimuli were not previously ignored. Alternatively, *reduced* negative priming reflects a relative *lack* of processing delay for target stimuli that were previously ignored. This implies *weakened* cognitive inhibition as it suggests a decreased capacity to ignore the [previously] irrelevant stimulus. Reduced negative priming (weakened cognitive inhibition) has been found at automatic rather than controlled levels of processing (Beech, Powell, McWilliam, & Claridge, 1989). Weakened cognitive inhibition has also been related to the positive symptoms of schizophrenia and ostensibly healthy individuals reporting schizotypal (psychosis-like) experiences (Moritz & Mass, 1997; Park, Püschel, Sauter, Rentsch, & Hell, 2002; Peters, Pickering, & Hemsley, 1994; Williams, 1995; see Minas & Park, 2007, for review). Consistent with this, Peters et al. (2000) found reduced negative priming in psychiatric

participants experiencing positive symptoms of schizophrenia at the time of testing. However, significant negative priming was demonstrated by currently asymptomatic schizophrenia patients with a history of positive symptoms. Such findings support the idea that positive symptoms of schizophrenia may arise via weakened cognitive inhibition at the early, automatic level of processing.

However, this conclusion has been challenged by a failure to replicate weakened inhibition in schizophrenia and schizotypal samples (Moritz & Andresen, 2004; Roesch-Ely, Spitzer, & Weisbord, 2003). Moreover, there is some evidence that reduced negative priming in schizophrenia and schizotypy may not be the result of weakened cognitive inhibition, but could rather be due to experimental characteristics, such as perceptual deficits which create processing difficulties and subsequently reduce negative priming when masked stimuli or short presentation times are used (Moritz, Jacobsen, Mersmann, Kloss, & Burghard, 2000; Moritz et al., 2001). Such formulations support the notion of intact inhibitory functioning in schizophrenia, but represent the minority viewpoint.

The primary impetus in the psychosis literature on cognitive inhibition has been to address the generic questions of whether, where, and what: *whether* inhibitory deficits are present in psychosis, *where* they are evident (e.g. automatic or controlled level of processing), and *what* symptoms are associated with them (i.e. how they may explain specific symptoms). The specific impact of threat on cognitive inhibition in schizophrenia and schizotypy has been less well studied; we note that at least one study of young individuals at familial risk for bipolar disorder has shown aberrant neural activation during the inhibition of fear but not in response to neutral faces (Roberts et al., 2013). It thus remains possible that intra-individual variation in cognitive inhibition may be moderated by the presence or absence of threat. For example, Nijenhuis and colleagues have shown that individuals with dissociative pathologies are characterized by *hyper* vigilance and *hyper* arousal as well as *hypo* vigilance and *lack of* arousal, depending on whether they are, at the time of assessment, in a psychobiological state connected to, or disconnected from, previous traumatic experiences (Hermans, Nijenhuis, Van Honk, Huntjens, & Van der Hart, 2006; Nijenhuis & Den Boer, 2007). Moreover, potential or actual threat exposure may alter the organization of cognitive functioning in dissociative individuals in a similar way to that evident with the presence and absence of positive symptoms in psychosis (Dorahy, 2006).

Research in dissociative disorders has been interested in the covariation between cognitive inhibitory functioning and threat stimuli. This work has used the flanker task and has focused on visual selective attention. The limited work on cognitive inhibition in dissociation indicates a potentially important finding: during experimental contexts in which dissociative individuals report heightened anxiety and are exposed to threat cues, negative priming shifts from significant to non-significant. When individuals with DID are assessed with neutral, single-digit numbers in the flanker task and informed that all stimuli are neutral, they demonstrate significant negative priming similar to control participants (Dorahy, Irwin, & Middleton, 2004; Dorahy, Middleton, & Irwin, 2004, 2005; Dorahy, McCusker, Loewenstein, Colbert, & Mulholland, 2006). However, when the flanker task is modified so that some stimuli will be seen as 'emotionally threatening', dissociative participants show reduced and non-significant negative priming – that is to say, they do *not* demonstrate slower processing of the target stimuli (Dorahy et al., 2005; 2006). Further, anxiety was found to be elevated in the dissociative sample in the 'emotional' compared to 'neutral' context. The fact that a generalized anxiety disorder sample showed the same pattern of anxiety elevation as the dissociative individuals but

a *different* pattern of negative priming across contexts (Dorahy et al., 2006) suggests that dissociation, and more specifically the interaction between anxiety and dissociation, is the key variable in threat-induced negative priming reductions in dissociative participants (Dorahy, 2006; Dorahy & Huntjens, 2007; Dorahy et al., 2006). Dorahy (2007) has argued that the reduced negative priming findings are compatible with a weakening of cognitive inhibitory processes during threat processing. Importantly, in dissociative individuals, weakened inhibition may allow a greater processing of both target and peripheral environmental stimuli by assisting a cognitive shift from selective attention processing to the dissociative individuals' more natural tendency to engage in divided attention processing (DePrince & Freyd, 1999; Dorahy, 2006). This allows parallel processing of multiple streams of information and may thereby facilitate threat stimuli detection.

The psychosis literature on negative priming has taken as its starting point Frith's proposal that weakened inhibition could explain delusions and hallucinations. Threat stimuli have not been used in this work. However, the results in DID samples suggest a possible reinterpretation of Peters et al.'s (2000) findings based on threat. Internally generated perceived threat is likely to be elevated in the symptomatic group on account of the presence of hallucinations and delusions. As suggested in the DID studies, increased threat may weaken cognitive inhibition and explain reduced negative priming in the symptomatic psychosis sample. Thus, while both psychotic and dissociative individuals may demonstrate decreased negative priming under conditions of threat (or while experiencing delusions or hallucinations), there is little evidence of successful divided attention processing in psychotic individuals.

The dissociation literature has viewed dissociation as a process that has cognitive inhibitory concomitants in terms of threat processing. In light of the fact that both trauma and dissociation are developing as important variables in understanding psychosis (Kilcommons & Morrison, 2005; Larkin & Morrison, 2006; Moskowitz & Corstens, 2007; Moskowitz, Read, Farrelly, Rudegeair, & Williams, 2009; Shevlin, Dorahy, & Adamson, 2007; Chapter 13 of this book), it would be of great interest to determine if asymptomatic psychosis samples generally, or those with heightened dissociative experiences on self-report measures, show reduced negative priming during threat processing. This would help determine if the cognitive processes associated with dissociation are present in psychosis groups. In keeping with cognitive experimental research strategies within the psychosis literature, this work may also adopt a symptom-focused approach where, for example, negative priming in threat and non-threat contexts could be examined in those with and without a heightened propensity for delusions or hallucinations. Models could then be developed for how reduced inhibition during threatening experiences adds to the cognitive explanation of such symptoms.

Conclusion

This chapter has examined cognitive experimental studies in the dissociation and psychosis literature. The primary findings suggest that divided attention is a feature of dissociation but not of psychosis. Cognitive inhibitory weakness is evident in those with dissociative disorders in threat contexts, but not when overt threat is absent. In paranoia, cognitive inhibitory weakness is evident during acute illness episodes, but not when symptoms remit. However, evidence for biased attentional processing of threat is apparent in both

clinically psychotic and psychosis-prone individuals, and appears to be independent of actual threat in the environment. These results point toward a similar process of increased internal salience and perception of threat in both dissociation and paranoid ideation.

Yet empirical efforts to understand cognitive processes in dissociation and psychosis have been more divergent than convergent in their initial aims. In the main, the differing cognitive foci for research largely reflects biases in historical psychiatric and psychological thought. That is, dissociation in the psychological literature has its origin as a putative psychological mechanism or process that gave rise to problems such as hysteria, historically, and dissociative disorders and symptoms more recently (Dorahy & Van der Hart, 2007; Janet, 1907; Kihlstrom, Glisky, & Angiulo, 1994; Van der Hart & Dorahy, 2009). Thus, dissociation has been conceived since its origin as both a mechanism (cause) and an outcome (symptom, disorder). The *process* of dissociation is thought to lead to various dissociative manifestations that have become synonymous with defensive manoeuvres designed to reduce the immediate impact of threatening environmental and psychological stimuli. This conceptualization has undoubtedly guided the cognitive research on dissociation. Studies of working memory and attentional processes in dissociative individuals have adopted a standpoint of dissociation as intimately related to threat, especially as a threat-reduction strategy. Work has examined how high dissociators keep threatening material from conscious awareness and the cognitive strategies utilized to reduce the impact of threat stimuli (e.g. divided attention; cognitive inhibition). Research has predominantly tried to understand how and what cognitive processes are associated with, or play a role in, the process of dissociation. Less attention has been given to how cognitive processes might explain dissociation when viewed as an outcome or symptom variable.

In contrast, schizophrenia and other disorders on the psychosis spectrum are not generally understood as primary processes (or explanatory mechanisms) for specific psychiatric outcomes, but rather are viewed as the outcomes themselves. Psychologically, these diagnostic outcomes or the symptoms of which they are composed are not believed to have their origin in a single putative process. Thus, cognitive research on psychosis-related conditions has progressed in a very different manner from that on dissociation. Psychotic outcomes in the form of symptoms have been isolated and studies have examined the cognitive processes that may give rise to or explain them.

The psychosis literature has therefore focused predominantly on explicating cognitive accounts of paranoia (i.e. the symptom), while the dissociation literature has attended to cognitive correlates of the process itself. A theme outlined in various parts of this book is that dissociation as a putative mechanism may explain psychotic symptom outcomes. This proposal has not yet been falsified; while there remain some contrasting findings in relation to the role of divided attentional processes in dissociation versus psychosis, consistent findings (despite being demonstrated under different paradigms) point toward potentially shared neurobiological processes for dissociation and paranoia, manifesting in both increased salience of internal threat and perception of threat where none may actually exist. Future cognitive research could assist in determining the validity of this view by examining whether the cognitive processes associated with threat in dissociative individuals are present in various psychotic symptoms (e.g. delusions or hallucinations), using comparable methods. That is, can the cognitive processes *associated* with dissociation provide an empirical *account* of psychotic symptoms?

Note

1 'Psychosis-prone' individuals display a range of cognitive and perceptual experiences that manifest as subclinical psychotic-like behaviours (Claridge, 1985; see Green, Boyle, & Raine, 2008 for a review).

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Part III

Clinical Perspectives

19

Dissociative Psychosis

Clinical and Theoretical Aspects

Onno van der Hart and Eliezer Witztum

Although Dissociative Psychosis (DP) is not currently recognized as a formal diagnostic category, specialists in the field of trauma-related dissociation have argued that treating it as such has great clinical value (Graham & Thavasotby, 1995; Şar & Özturk, 2009; Van der Hart, Nijenhuis, & Steele, 2006; Van der Hart, Witztum, & Friedman, 1993). Originally called hysterical psychosis (HP; cf. Witztum & Van der Hart, 2008, Chapter 3 of this book), this syndrome has been documented in a number of traumatized patients with diagnoses ranging from post-traumatic stress disorder (PTSD) to dissociative identity disorder (DID) (Graham & Thavasotby, 1995; Şar & Özturk, 2009; Tutkun, Yargic, & Şar, 1996; Van der Hart & Spiegel, 1993; Van der Hart et al., 1993, 2006). It has been proposed that for a psychotic disorder or episode to be recognized as DP, it should be trauma related and embedded in a structural dissociation of the personality. Goal-directed actions that the person cannot control should be present in the psychosis and dissociative symptoms should also be present (Van der Hart et al., 1993, 2006).

The acceptability of DP as a diagnostic syndrome is influenced partly by the term 'psychosis' being broadly defined in the psychiatric literature. According to Jackson (2001), for instance, psychosis refers to 'a broad category of mental disorders that are characterized by severe abnormalities of thought process. These are associated with disturbance of the sense of reality and often with delusions, hallucinations, and disruptions in the sense of personal identity' (p. 334). Thus, when the diagnosis of DP is present, the person's *hierarchy of degrees of reality* is severely compromised (Janet, 1928; Van der Hart et al., 2006). Normally, orientation in place, time, and identity has the highest degree of reality. However, when, for instance, inner threatening voices, or dissociative parts of the personality re-experiencing traumatizing events, or related terrifying fantasies are accorded a higher degree of reality (i.e. experienced as more real) than the present environment, the syndrome of dissociative psychotic episodes might be appropriately considered. Time may also be a factor in the decision: while most instances of dissociative (formerly hysterical) psychosis may last for a few days or more, short episodes (lasting several minutes) would hardly merit a diagnosis of DP.

In this chapter we present Pierre Janet's original analysis of HP's dissociative nature, followed by a description of DP in terms of the modern theory of structural dissociation

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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of the personality, which has its roots in Janet's pioneering dissociation theory. We present a number of forms of DP and discuss clinical applications of this theoretical approach using case presentations.

Dissociative Psychosis and Pierre Janet's Dissociation Theory

Janet (1907) defined hysteria as a malady of *personal synthesis*, 'a form of mental depression [i.e. lowered integrative capacity] characterized by the retraction of the field of consciousness and a tendency to the dissociation and emancipation of ideas and functions that constitute personality' (p. 332). Although Janet was not always explicit about this, he thought that these dissociative 'systems of ideas and functions' had their own sense of self, as well as their own range of affect and behaviour. He regarded physical illness, exhaustion, and, especially, the vehement emotions inherent in traumatic experiences as being the primary causes for this integrative failure (Janet, 1889, 1909, 1911). In keeping with this formulation, the most obvious of these dissociative systems contain traumatic memories, which he originally described as *primary idées fixes* or *primary emotional states* (Janet, 1898). These systems consisted of 'psychological and physiological phenomena, of images and movements of a multiform character' (Janet, 1919/1925, p. 597), each with its own sense of self. When these systems are reactivated, whether in nightmares or in a waking state, persons are 'continuing the action, or rather the attempt at action, which began when the [trauma] happened; and they exhaust themselves in these everlasting recommencements' (Janet, 1919/1925, p. 663).

Related to *primary idées fixes* (i.e. traumatic memories) are *secondary idées fixes* or *secondary emotional states* (cf. Van der Hart & Friedman, 1989). These *idées fixes* are not based on actual events, but are related to them, and may manifest as fantasies or dream elaborations. For example, a person might develop hallucinations of being in hell secondarily related to an extreme sense of guilt during or following a traumatic experience. For Janet, such *secondary idées fixes*, which form the basis of secondary dissociative states, were required for HP; even when traumatic memories completely dominated consciousness and behaviour, with the person not oriented to time or place, Janet would not speak of HP (which we call DP) unless *secondary idées fixes* developed. However, as discussed below, we believe that a wider range of phenomena deserve the label DP.

Janet observed that dissociative patients alternate between experiencing too little and experiencing too much of their trauma:

> Two apparently contrasting phenomena constitute a syndrome: They are linked together, and the illness consists of two simultaneous things: 1) the inability of the subject to consciously and voluntarily recall the memories, and 2) the automatic, irresistible and inopportune reproduction of the same memories (Janet, 1904, 1911, p. 528).

The same pattern could also be observed with regard to *secondary idées fixes*. The pattern involves an alternation between what we call two different dissociative parts of the personality: one part engaged in daily living and characterized by a fear or phobia of traumatic memory (Janet, 1904/11), and another part involved in traumatic memories

and containing *secondary idées fixes* which manifest, for example, as trauma-related hallucinations. This alternation may explain why DP is often of a relatively short duration and may suddenly disappear – to reappear when the individual encounters salient reminders of the traumatic experience. Janet (1889, 1904/11, 1928) observed that these parts may not only alternate with each other, but the part involved in the traumatic memories and/or *secondary idées fixes* also may intrude upon the dissociative part involved in daily living. Again, this is especially the case when the individual encounters salient reminders of the traumatizing event (Janet, 1928).

According to Janet, the more an individual is traumatized, the greater the fragmentation of his or her personality: '[Traumas] produce their disintegrative effects in proportion to their intensity, duration, and repetition' (Janet, 1909, p. 1556). This implies that DP as a dissociative condition may be part of a relatively simple or a more complex trauma-related dissociation of the personality. The more recently developed theory of structural dissociation of the personality basically constitutes an extension of Janet's pioneering dissociation theory.

Dissociative Psychosis and the Theory of Structural Dissociation of Personality

The theory of trauma-related structural dissociation of the personality (Nijenhuis, Van der Hart, & Steele, 2002; Van der Hart et al., 2006) involves a comprehensive conceptualization and understanding of a wide range of trauma-related disorders, including the majority of DSM-5 dissociative disorders. According to this theory, trauma-related disorders involve insufficient integration among two or more dissociative parts of the personality, understood as self-conscious psychobiological dynamic systems. Basically, as observed already by Janet, the person, functioning as one type of dissociative part, may try to go on with life as if the traumatizing event had not affected him or her. Following Myers (1940), we have called this part the *apparently normal part of the personality* (ANP; Van der Hart et al., 2006). As the other type of dissociative part, i.e. the *emotional part of the personality* (EP), the person is fixated in traumatic memories and recurrently re-experiences these memories.

According to this theory, the functioning of these different types of dissociative parts is mediated by different classes of evolutionary-derived action systems (Nijenhuis et al., 2002; Van der Hart et al., 2006), also known as motivational systems (Fanselow & Lester, 1988; Lang, Bradley, & Cuthbert, 1998) or emotional operating systems (Panksepp, 1998; Panksepp & Biven, 2012). Action systems constitute major components of personality (Carver, Sutton, & Scheier, 2000; Lang et al., 1998); over time they become largely integrated in mentally healthy individuals. Action systems can be placed into two major classes. One class of action systems is for approach to attractive stimuli (e.g. exploration, energy management, play, sexuality/reproduction, and, perhaps, social ranking, and social cooperation). These action systems serve functioning in daily life and survival of the species. The other class involves the mammalian action system and its subsystems for defence against bodily threat and threat to life (Fanselow & Lester, 1988). For this class of action systems, the primary motivational function is the avoidance of aversive stimuli. When under the influence of a particular action system, individuals engage in actions that help them achieve the goals of that action system, and

disengage from actions that are at odds with these goals or that are irrelevant in this regard. Actions systems guide and integrate perception, sensation, affect, thought, and body movements in constant and rapid interaction with each other (cf. Hurley, 1998).

Prototypes of Structural Dissociation

The primary, prototypical form of structural dissociation of the personality pertains to a lack of integration between one ANP and one EP. The person's actions as ANP are predominantly mediated by a constellation of action systems for approach to attractive stimuli and thus to fulfil functions in daily life, avoiding traumatic memories. However, as EP the person's actions are essentially mediated by the mammalian defence system and attachment cry. Fixated on traumatic memories and disoriented regarding the survivor's actual position in time, place, and person, an EP is highly motivated to engage in defensive actions against (perceived) threat. This primary structural dissociation is characteristic of post-traumatic stress disorder (PTSD; APA, 2000, 2013) and simple forms of somatoform dissociative disorders (i.e. dissociative disorders of sensation and movement, World Health Organization, 1992).

Secondary structural dissociation is a more complex prototype of structural dissociation. It involves more than one EP and thus a lack of coherence among subsystems of defence, such as flight, freeze, fight, total submission (playing dead). Secondary structural dissociation marks complex PTSD, some forms of borderline personality disorder, and many cases of dissociative disorder not otherwise specified (DDNOS; APA, 2000), now labelled as other specified dissociative disorder (OSDD; APA, 2013). In tertiary structural dissociation – the most complex prototype on the dimension of structural dissociation of the personality – there is also a lack of integration among different action systems for daily life as well as among EPs. This organization characterizes dissociative identity disorder (DID; APA, 2000, 2013). Clinical observations indicate that dissociative psychosis is usually embedded in secondary or tertiary structural dissociation (e.g. Tutkun et al., 1996; Van der Hart & Van der Velden, 1987; Van der Hart et al., 1993).

Dissociative Psychosis

We define DP as a syndrome involving one or more EPs that seem to be characterized by psychotic experiences (as defined above, Jackson, 2001), which either obtain executive control or heavily intrude upon ANP. However, the question of what defines these EPs as 'psychotic' is a difficult one to answer. In mainstream psychiatry, persons may be diagnosed as being psychotic or schizophrenic and receive heavy doses of antipsychotic medications or even Electro-Convulsive Therapy (ECT), when actually the person as ANP is suffering from voices belonging to perpetrator-imitating parts, or when a child EP manifesting disturbed, psychotic-like mental and behavioural actions may be present. Dissociative disorder specialists would likely recognize the dissociative nature of these experiences/phenomena, leading to a diagnosis of dissociative disorder not otherwise specified (DDNOS; now renamed as OSDD) or DID (Şar & Özturk, 2009), and offer phase-oriented psychotherapy as the treatment of choice (e.g. Ross, 2004; Van der Hart et al., 2006). Even so, we believe that dissociative psychotic episodes may require specific interventions not typically used with dissociative disorders, including, potentially, short-term inpatient admissions or medication; however, we advise caution with

the use of antipsychotic medications, which might increase feelings of alienation. To focus exclusively on the underlying dissociative disorder and ignore the dissociative psychotic episode could be clinically counterproductive. Furthermore, clinicians who are not dissociative disorder specialists when witnessing frank psychotic symptoms might be more willing to consider dissociative psychotic episodes instead of diagnosing traditional dissociative disorders. In short, dissociative psychosis could eventually be a window into understanding complex dissociative disorders such as DDNOS/OSDD or DID (Şar & Özturk, 2009).

The following dissociative conditions could be considered instances of dissociative psychotic episodes: (i) an ANP feeling overwhelmed by threatening and/or imperative voices; (ii) an EP(s) in executive control re-experiencing traumatizing events (Janet's *primary idées fixes*); (iii) an EP(s) in executive control (re)experiencing terrifying hallucinations derived from traumatic experiences (Janet's *secondary idées fixes*); (iv) rapid switching among EPs because of reactivated traumatic memories; and (v) the phenomenon of *double emotion* (Janet, 1928; Witztum, Margalit, & Van der Hart, 2002), in particular instances in which current traumatization reactivates past traumatization. These various forms of dissociative psychosis are not, by definition, mutually exclusive – hence the often observed plasticity or polymorphism (Van der Hart et al., 1993).

The five forms of DP distinguished above are now presented using case examples:

ANP Overwhelmed by Threatening and/or Imperative Voices

Hearing voices commenting on and/or conversing with one another has been one of the criteria to diagnose a person as suffering from schizophrenia. However, this symptom is actually far more characteristic of DID patients than of schizophrenic patients (Ross, 2004, Chapter 13 of this book). The mere experience of hearing voices does not warrant the diagnosis of schizophrenia or a psychotic disorder. When a dissociative disorder patient, as ANP, is completely overwhelmed by threatening voices and becomes unable to function in daily life, we believe a diagnosis of DP might be apt. These voices may be particularly active when EPs perceive stimuli reminding them of previous traumatizing events which reactivate traumatic memories and associated *secondary idées fixes* and defensive responses.

EP(s) in Executive Control Re-experiencing Traumatizing Events

The re-experience of a traumatizing event is often very short and would not suggest the idea of a dissociative psychosis. However, such episodes may last for an extended period of time, up to many hours or even days, and involve the complete or almost complete loss of the current context. Under such circumstances, we believe these experiences would merit the label of a dissociative psychotic episode. Janet (Janet, 1911, cited in Van der Kolk & Van der Hart, 1991) provided a classic example. His patient Irène, as ANP, was amnestic for the dramatic night in which her mother died. This traumatizing event took place after she had slept very little for two months while caring for her mother; the death, occurring while she was in a physical and mental weakened state, (and therefore with a strongly reduced integrative capacity), led to the development of a DP. Whenever the traumatic memory was reactivated, Irène as EP relived and re-enacted, for three to four hours, the scene of her mother's death, including the irrational ways in which she tried to aid her, even after she had died. Two contemporary examples are described below.

Anja

Van der Hart et al. (2006) describe a case of dissociative psychosis in Anja, a woman diagnosed with DDNOS (now renamed as OSDD). She, as a very young EP,

> walked around for days in an apparent haze, making tiny steps, feet and knees turned inward, and uttering in a child-like voice, 'All red, everything is red'. Medication, rest, and time did not relieve this condition. When the therapist joined her and agreed that everything was red in her world, he suggested that some places perhaps might be more or less red than other places. This approach eventually helped Anja to relate that the most red place was her underwear. It was blood after anal rape at a young age by a man who had club feet, and whose gait she had apparently imitated. This revelation, together with the therapist's empathic responses, ended the psychotic episode within a few hours (Van der Hart et al., 2006, p. 122).

Patricia

Each year in the middle of August, Patricia became completely disoriented and jumped into a canal in Amsterdam. Every time this happened she was admitted to a psychiatric clinic and diagnosed as suffering from a psychotic episode. Eventually the diagnosis of DID was made. When a similar episode occurred, the therapist contacted an observing part of her personality, which informed him that this episode involved a child part (EP) re-enacting a traumatizing event from her childhood. In the 1950s, when she was six and growing up in a tropical country, her abusive mother put her and her younger brother on a boat to a European country, in order to be taken in by a children's home run by nuns.

Right before the boat departed, her mother saw that Patricia had broken her toothbrush. The mother became extremely violent, screamed, grabbed Patricia by the neck, thrashed her head against the wall, threw her on the floor, kicked her, and put her foot on Patricia's throat, almost suffocating her. Subsequently, when the mother had gone, she and her brother were left standing on the deck of the boat. One EP desperately wanted to jump off the boat in order to drown and die, but another part of her personality felt a tremendous need to take care of her young brother and thus was able to prevent her from jumping. In later years, when Patricia and her brother lived their separate lives, the need to take care of him had greatly diminished. And in successive anniversary reactions of the maltreatment on board the ship, the child part that wanted to complete the action of jumping could do so unimpeded by the other part.

We do not know what factor(s) were at work when the EP wanted to jump overboard to die. It may have been the unbearable experience of being shamed and violently punished for breaking the toothbrush and then being completely abandoned – left to her own panic and disintegration. On a more abstract level, we can say that when, during a traumatizing event, an action is not completed, the tendency towards its completion remains in existence in at least one of the dissociative parts of the personality. This is so even when the uncompleted actions are destructive or self-destructive. Thus, when the traumatic memory is re-activated, the drive to complete such actions is also activated. (The same may be true in the case of B, described below.)

EP(s) in Executive Control (Re)experiencing Terrifying Hallucinations Derived from Traumatic Experiences

Dissociative patients as EPs may also experience terrifying hallucinations (*secondary idées fixes*), which are derived from primary traumatic experiences. One type of these secondary experiences pertains to some elements from the original traumatic experience now dominating in new forms in various current life settings. The other type involves hallucinations of a purely imagined nature linked to the primary traumatic experiences.

Elements of Traumatic Experience Dominating in New Forms

Here, elements of the original traumatic experience, such as representations of perpetrators, seem to take on a life of their own and interfere in the survivor's current life. One way of formulating this is that a reactivated pathogenic kernel of the traumatic experience stimulates new associations, remaining unchecked, or uncorrected by critical reasoning.

B, a 15-year-old refugee boy from a Balkan country, provides an example. He arrived with his parents and siblings in another European country approximately three years earlier and the family's legal status was uncertain: they might be sent back to their country of origin. Each year since then in the autumn, B appeared to suffer from psychotic episodes. He saw two masked men who followed him everywhere and persuaded him to go fishing with them in dangerous waters or to stand on a railway track, claiming that it was not dangerous. But what they really seemed to want was to have B commit suicide. At times B heard the men saying that if he does not obey them, they would kill his mother, which motivated him to try and kill himself. Concerned for his son, his father watched and followed him during these times in order to prevent something bad from happening. However, one autumn his behaviour became more dangerous. He was convinced that the men would prevent the family from getting their residency permit and that they would be sent back to their former country. He tried to drop his 11-years-old brother from a bridge onto a railway track. He also tried to run away during the night; his father was unable to manage him and B had to be admitted to a psychiatric hospital.

In the hospital it became clear that B had a history of severe war-related traumatization. He had seen people tortured and killed, among them his closest friend when he was 8. However, the worst traumatization for him occurred after the war when, at age 11, he and his mother were walking on the road to a neighbouring village. Two masked men attacked them and he tried to protect his mother. They beat him so severely that he believed, right before losing consciousness, that he had been murdered. These two men subsequently became the threatening figures in his hallucinations. B regained consciousness in a hospital. He was told that a man from their neighbourhood had heard him and his mother screaming, had come to rescue them, and had brought them to the hospital. Meanwhile, the two men had run away. After this traumatizing event, both B and his mother became so scared and depressed that the family left the country as refugees.

B was referred to a trauma therapist. He and his therapist agreed that the two persecuting figures in his hallucinations were connected to the original masked attackers. The figures had told B that they had come back in order to complete their work (i.e. killing him). As the family's legal status in the new country was still uncertain, there was a strong possibility of being sent back to his former country. The figures had

told him that they had already dug a grave for his family, would kill them, and build a highway on the grave so that nobody would ever find them. The therapist encountered B as ANP, who was doing well at school and in sports and who had some good friends. This part expressed scepticism about the figures' existence. There was also the EP who kept the traumatic memories of the original attack and who firmly believed in the actual reality of the two figures, who, the therapist hypothesized, were two perpetrator-imitating EPs. Given B's wartime traumatization, she also suspected there were more EPs, and concluded that B suffered from recurring dissociative psychotic episodes as part of secondary structural dissociation of his personality, which she diagnosed as DDNOS (OSDD).

The therapist told B as EP that the two EPs which represented the men were very welcome in the sessions, so that she could talk with them. Initially, he was very reluctant because he feared that they would become dangerous to the therapist. Subsequently, he became motivated to allow these EPs to express themselves but observed that when he tried to do so, they disappeared. Thus, the less fearful he became of them, the less aware he became of them. Since then, B as ANP has become stronger and more dominant, and therapy has focused more on helping him adapt better to living in his new country, for which his family was eventually granted legal permission.

Transformations of the Traumatic Experiences to Symbolic Hallucinations

The second type of secondary experiences involves hallucinations of a purely symbolic kind linked to the primary traumatic experiences. Prime examples are guilt-induced visions of being persecuted by a devil or demon, or of being tortured in hell (Janet, 1898; Van der Hart & Spiegel, 1993; Van der Hart et al., 1993). Here a pathogenic kernel of the original traumatic experiences, such as extreme guilt, stimulates the development of imagined consequences based on existing (religious) beliefs about the possibilities of such consequences (see a vivid illustration in Avraham case below).

Van der Hart et al. (2006) presented the following example:

> Naomi was three years old when her baby sister died, which was traumatic for her and her parents, who were unable to comfort her. Having a fundamentalist religious background, the parents felt extremely guilty about the death of their daughter and were unable to provide sufficient emotional safety and care for their other children. Naomi also felt guilty, and subsequently developed a fantasy in which she was condemned for the death of her sister by being sent to hell where she was punished by the devil – in fact, an EP – and would burn forever. Later in life, whenever she experienced situations of abandonment, such as the death of another family member or the breaking off of her engagement with her fiancé, she would suffer from burning pain and from nightmares of burning in hell (p. 65).

Rapid Switching Manifesting as DP

'Rapid switching' (Putnam, 1989) among EPs is a commonly reported phenomenon in trauma survivors with secondary or tertiary structural dissociation that seems to occur, for instance, when traumatic memories are reactivated or new traumatizing situations are encountered (which also may reactivate existing traumatic memories). One survivor of childhood torture described this rapid switching as follows: 'Away in the head, everybody in turn knowing/seeing/feeling something, faster and faster and faster in order to

be little and much' (Van der Hart et al., 2006, p. 71). When this is the case, the terrified dissociative patient may be so much out of touch with current reality that the label of a DP episode might be in order.

Double Emotion Manifesting as DP

In *double emotion* current traumatization reactivates past traumatization. Thus, the acute traumatic response becomes a mixture of reactions to both the new and the old traumatizing events (Janet, 1928; Van der Hart et al., 2006). When this overwhelming experience seems to develop into a longer lasting pattern, the diagnosis of DP might be in order. In the case of Avraham (first reported in Bilu, Witztum, & Van der Hart, 1990; Van der Hart et al., 1993), we see a complex clinical picture in which the patient remained stuck not only in re-experiencing an aspect of the current traumatizing event and a previous traumatizing event (*primary idées fixes*) but also developed terrifying hallucinations derived from the previous experience (*secondary idées fixes*).

Clinical Vignette

Avraham, a 35-year old ultra-orthodox Jew of Sephardic background, initially presented in a mental health office in Jerusalem mute but extremely agitated, making repeated movements with his arms – vehement upward movements followed by fast, back and forth, horizontal movements. He was diagnosed as psychotic and prescribed antipsychotic medications. As the medication did not have any positive effect, a trauma and dissociation perspective appeared to be necessary; therapy sessions were initiated and included him and his wife.

Avraham had witnessed a terrorist attack near the Western Wall of Jerusalem. Though not physically injured, he fell in shock to the ground. Afterward, he suffered from anxiety, startle reactions, and a lack of concentration. His wife said that he spoke frequently about death, talked to himself, ate too much, cried, lost his libido, had sleep problems, and neglected himself. Avraham had told his wife about a frightening figure, who he named 'the Black' that haunted him. During this frightening vision he ran around the room and banged his head against the wall. He later described the figure as non-human (red eyes, legs like a chicken's feet – a traditional description of a demon in Jewish folklore). He was afraid to leave the house and kept all windows and curtains closed, fearing that people would try to kill him.

The therapists (EW and OvdH) decided to use hypnosis to treat this dissociative disorder. Under hypnosis, Avraham reported that the black figure had said that he had killed his father and now would kill him. (His father had been killed in a traffic accident when Avraham was eight years old.) The patient saw his father standing in the shadows, looking at him sadly. Avraham believed the black figure was a demon. The therapists wanted to help him fight the demon actively and gave him a traditional incantation 'Go, go, go away because you do not belong to our world!'. Avraham reported that saying this worked well during the sessions, but not at home.

Then, in order to break through the stalemate, the therapists placed Avraham under hypnosis and introduced imagery work. Avraham was instructed to close his eyes and visualize the place where he last saw the demon. His response was 'a desolate place in the desert'. This description was used by the therapists as a guiding metaphor for his current state of life. Avraham was urged to look around for signs indicating the direction he should take in order to find protection. At the beginning he said he saw nothing, but the therapists insisted he should continue to scan the landscape. Eventually, far

away on the horizon he saw a small spot of green. The therapists suggested that this could be a place where he could find shelter, water, food, and the company he was looking for. Avraham started to walk in this direction, but 'the Black' and his aides appeared, trying to distract him from going that way. The therapists then asked him to encourage the demon or his aides to approach him, so he could try to capture them; strikingly, they appeared too afraid to come closer. This restored some of the patient's confidence. In the following sessions, the metaphor of moving through the desert towards the distant green spot was crystallized as Avraham – aided by his wife and with encouragement from the therapist – moved in the direction of 'the green spot' despite the obstacles and the recurrent attacks of 'the Black' and his aides. In the next session, he came closer to 'the green spot' and described it as a beautiful garden surrounded by high walls and a gate. He also smelled very pleasant odours from the garden. His expression changed for the good, but then 'the Black' and his aides attacked him more harshly and tried to throw him into a hole.

Another method of empowering Avraham was to suggest visiting and praying at a *Zaddik*'s (a saint's) tomb. Avraham requested the saint's help in fighting the demon and at the tomb discovered a 'secret weapon' (the *Zaddik*'s power) – to make a special request on the anniversary of the saint's passing. Avraham felt more powerful with the support of the *Zaddik*, but his problems continued. In the final step, Avraham used the help of the *Zaddik*, and the therapists' suggestions and encouragement and cried: 'I am not afraid of you! Go away!'. He also cited verses from Psalms such as 'He that dwells in the secret place of the Most High shall abide under the shadow of the Almighty.' (Psalms 91:1). He stood up and gestured with his hands and legs, kicked in the air (fighting the demons), and said finally that the demons ran away.

The therapists asked him under hypnosis to continue his way towards the green spot. In the next session, the patient and his wife said that the number of attacks had decreased and that he felt more confident in his ability to fight off 'the Black'. Then, a black dog appeared. By spontaneously throwing an imaginary stone at him, Avraham managed to frighten the dog away. As he approached the green spot, he requested the guardian at the gate to let him into the garden. Inside Avraham saw many *Zaddikim* with enlightened faces and white beards. Consistent with various traditions of Jewish mythology, he told his wife and the therapists that he was entering the Lower Paradise, that the air smelled like perfume, and that he saw two springs of water. He was encouraged to drink and satisfy his thirst. He said that the water was sweet and fresh, and he appeared completely refreshed and reborn.

He also saw his grandfather, after whom he was named and whom he admired. He looked for his father. Finally, he saw him and ran to him, embraced him, and spoke to him with excitement and great joy. He ran to his grandfather as well and embraced him. Then he met his own Rabbi, who had died in a traffic accident when Avraham was 18. At the end of the session, the therapist suggested that Avraham would from now on be assisted by all these saints, his father, and his grandfather. During the next session (six months into the treatment) Avraham said that the journey to the Lower Paradise was a great privilege. He added that it was like a mystical miracle but, even so, he did not wish to return to it. His wife said that Avraham slept well every night and that apparently all hallucinations and delusions had disappeared. Avraham felt very good, albeit a bit weak, and he had spent much time with his children. The anniversary of his father's death occurred soon after. He visited the grave and cried there, feeling great relief. In a 10-year follow-up, Avraham was functioning well as the head of his family. He did not suffer from particular behavioural problems and continued his studies in the Yeshiva (Witztum & Goodman, 1999).

In short, the patient's dissociative psychosis was induced by the phenomenon of double emotion, in which the acute traumatic experience of a terrorist attack reactivated the traumatic loss of his father experienced in childhood. Both the traumatic loss and the terrorist attack can be seen as *primary idée fixes*, while the belief and hallucinations of a persecuting demon constitutes *secondary idée fixes*.

Discussion and Conclusion

Theoretical notions about the symbolic and psychopathological nature of trauma-induced psychosis were conceptualized a century ago as hysterical psychosis (see Chapter 3 of this book). This syndrome has been documented in a number of traumatized patients with diagnoses ranging from PTSD to dissociative identity disorder (DID) (see Van der Hart et al., 1993).

We have proposed that for a psychotic disorder or episode to be recognized as a syndrome of dissociative psychosis, it should be trauma-related and embedded in a structural dissociation of the personality. The recognition of such a syndrome might prevent misdiagnosis such as schizophrenia and, in its wake, inappropriate treatment. In general psychiatric practice, this is far too often the case. Instead, clinical experience indicates that phase-oriented psychotherapy based on the recognition of the dissociative nature of this condition – whether or not supported by appropriate pharmacotherapy – should be the treatment of choice. In less complex cases, such therapy might be relatively short-term. In more complicated cases, in which DP is part of a more complex DDNOS/OSDD or DID, treating this condition should be only one component of a more encompassing therapeutic approach. In all cases, therapy should involve treatment of the traumatic memories (*primary idées fixes*) and the associated fantasies, hallucinations, and beliefs (*secondary idées fixes*), in order to be completely successful.

In identifying dissociative psychotic episodes in patients with more complex dissociative disorders, the clinician should become aware of the potential need for special interventions (including, when needed, admission to crisis centres or a psychiatric clinic). When the patient as ANP is able to go on with life relatively undisturbed, however, the label of DP becomes unnecessary.

In conclusion, we emphasize in this chapter the diagnostic and therapeutic value of a (trauma-related) DP syndrome. Consideration of such a syndrome could provide a suitable alternative in settings where the dissociative phenomena described here would typically result in a diagnosis of schizophrenia or psychosis. However, we acknowledge that this chapter is based primarily on theoretical constructs and clinical observations. Systematic studies regarding the appropriateness of the DP syndrome as an adjunct to other dissociative disorders, as well as the effectiveness of its treatment, are strongly needed.

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20

Dissociative Schizophrenia

A Proposed Subtype of Schizophrenia

Colin A. Ross

Bleuler (1950 [1911]) coined the term *schizophrenia* in his 1911 text entitled *Dementia Praecox or the Group of Schizophrenias* (Moskowitz & Heim, 2011). Schizophrenia means 'split mind'. Bleuler stated that 'the splitting is the fundamental prerequisite condition of most of the complicated phenomena of the disease. It is the splitting which gives the peculiar stamp to the entire symptomatology' (p. 362). He went on to say that '[t]he term "dissociation" has already been in use for a long time to designate similar observations' (p. 383).

For Bleuler, splitting and dissociation were synonyms. Splitting-dissociation is pervasive in Bleuler's schizophrenia and can include all psychic functions. In his text, Bleuler provides clinical examples of the splitting of: attention, personality, touch, ideas, somatic sensations, will, memory, emotion, voice, hallucinations, movement, pain, arousal, personal names, and physiological functions such as heart rate.

Indeed, Bleuler's description of many of his schizophrenia cases is similar to the modern description of dissociative identity disorder (Putnam, 1989; Ross, 1997). Bleuler says that his patients typically have amnesia for periods of time when different identities take control of their bodies. He says that one part of the person refers to other parts in the third person, and he describes changes in voice, mannerisms, posture, and identity when there is a switch of executive control. He says that the different identities often have different names.

From 1911, a historical process resulted in an almost complete dissociation between study, research, and treatment on dissociative disorders and the literature on schizophrenia. Schizophrenia, by and large, was defined as a genetic biomedical brain disorder treated with medication. Psychosocial treatments were adjunctive and education of patients and families was driven by the disease model and directed at medication compliance (Foote & Park, 2008; Tschoeke & Steinert, 2010). From the perspective of the schizophrenia field, attention to dissociative identity disorder (DID) was peripheral, or non-existent, in terms of research, publications, and influence on theory and clinical practice.

This dissociation between the schizophrenia field and the dissociative disorders field has not been symmetrical, however; there has been serious consideration of the relationship between dissociation and psychosis in the dissociative disorders field for

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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over 30 years (Anglin, Polanco-Roman, & Lui, 2015; Bliss, 1980; Dhossche, Ross, & Stoppelbein, 2012; Fan et al., 2010; Goren, Phillips, Chapman, & Salo, 2012; Kluft, 1987; Laddis & Dell, 2012; Laferre-Simard, Lecomte, & Ahoundova, 2014; Moskowitz, 2012; Muenzenmaier et al., 2015; Perona-Garcelan et al., 2010, 2014; Rosenbaum, 1980; Ross, 2004; Ross & Halpern, 2009; Şar et al., 2010; Vogel, Braungardt, Grabe, Schneider, & Klauer, 2013; Vogel et al., 2009; Yu et al., 2010).

This deficit in the schizophrenia literature has begun to be corrected in the last five years, with papers published in schizophrenia and general psychiatric journals addressing dissociation (Alderson-Day et al., 2014; Bozkurt, Yanartas, Zincir, & Semiz, 2014; Braehler et al., 2013; Deville, Moeglin, & Sentissi, 2014; Evans, Reid, Preston, Palmier-Claus, & Sellwood, 2015; Matheson, Shepherd, Pinchbeck, Laurens, & Carr, 2013; Moskowitz & Heim, 2011; Russo et al., 2014; Schäfer et al., 2012; Tschoeke, Steinert, Flammer, & Uhlmann, 2014).

In an effort to encourage collaboration between the schizophrenia and dissociation fields, I have proposed the existence of a dissociative subtype of schizophrenia (Laferre-Simard & Lecomte, 2010; Laferre-Simard et al., 2014; Ross, 2004). The purpose of this chapter is to describe the features of dissociative schizophrenia and to describe the clinical model and research data supporting its existence. Many of Bleuler's cases would meet my proposed criteria for dissociative schizophrenia.

A Broader Conception of Structural Dissociation and Dissociative Disorders

A modified version of the theory of structural dissociation of the personality (Van der Hart, Nijenhuis, & Steele, 2006) can account for a wide range of mental disorders and for the co-occurrence of these disorders in the same individual. Disorders that fall within this group include: DID, post-traumatic stress disorder (PTSD), somatic symptom disorder (Ross, 2015), borderline personality disorder (BPD), many cases of schizophrenia, impulse control disorders, many paraphilias (Ross, 2008), and obsessive compulsive disorder (OCD; Ross, 2013).

The model I am presenting is a modification (Ross, 2013) of the theory of structural dissociation of the personality developed by Van der Hart et al. (2006; see also Chapter 19 of this book). I am taking their model and extending the domain of diagnoses that can be incorporated within it. I am particularly interested in using the model to solve the problem of extensive comorbidity in survivors of extreme trauma (Ross, 2007a). Van der Hart et al. (2006) require the existence of an emotional personality (EP) with at least a rudimentary sense of separate selfhood for structural dissociation of the personality to be occurring. This is certainly the case in DID and other specified dissociative disorder (OSDD). However, I don't think that the presence of an EP, with a distinct first-person perspective, is required for a disorder to be dissociative in nature. Rather, I theorize that a dissociated compartment may house a feeling, impulse, memory, or other psychic content without an EP being present. Perhaps it would be most accurate to call this a structural dissociation model – based as it is on compartmentalization, but not a structural dissociation of the *personality* as defined by Van der Hart et al. (2006). With this modification, I argue (Ross, 2013) that a wide range of DSM-5 disorders, many of which are commonly present as comorbid disorders in DID, can be considered dissociative,

and can be easily accounted for within my model of structural dissociation. I call my model *structural dissociation* in order to clarify that, although it overlaps with the theory of Van der Hart et al. (2006) for DID and OSDD, it extends the domain of dissociation by not requiring the presence of an EP in every dissociated compartment.

The Relationship Between Doctor, Patient, and Symptoms within My Structural Dissociation Model

In general medicine, 'the patient' is 'the person'. The patient comes to the doctor with symptoms, say, swelling, pain, stiffness, and redness in the left knee. The doctor takes a history, does a physical examination, orders lab tests, and arrives at a diagnosis. Since there usually is a single diagnosis, I call this approach *the single disease model*.

In general medicine, it is important to make a correct diagnosis because *diagnosis determines treatment*. For instance, the treatments for arthritis of the knee, cancer of the pancreas, and a bacterial ear infection are distinctly different. In psychiatry, this medical model approach has been applied to addictions and mental disorders. The doctor interviews the patient (i.e. the person), makes a diagnosis, and initiates a treatment plan based on the diagnosis. The psychiatrist forms a treatment alliance with the patient in order to get rid of the patient's symptoms.

Within the medical model, the symptoms are not 'the patient'. The symptoms do not have a point of view, and the doctor does not ask them questions, consider their needs, or attempt to form a treatment alliance with them. Talking to the voices of a person with a diagnosis of schizophrenia, within the medical model, would be like asking a patient's knee a question. Only an impaired physician would exhibit such behaviour.

In my model of structural dissociation, however, the symptoms can arise from dissociated sub-selves or from a dissociated compartment that does not contain an EP with a subjective sense of selfhood (Longden, Madill, & Waterman, 2012). The doctor or therapist forms a treatment alliance with the various part-selves, engages them in the treatment process, and alleviates the symptoms by integrating the dissociated sub-selves into the executive self. If there is no EP or sub-self, then there will not be complex voices that speak in sentences and who can be engaged with in treatment. There will simply be intruding thoughts, feelings, impulses, memories, and sensations, which nevertheless need to be integrated into the executive self.

Intrusions and Withdrawals are the Predominant Causes of Symptoms in a Structurally Dissociated Psyche

In classical DID, the characteristic symptoms are due to full switches of executive control between highly structured, personified, and discrete ego states, or alter personalities. The alters are separated by full amnesia barriers. Actually, however, even in classical DID, most of the symptoms do not arise from full, discrete switches of executive control. Rather, they arise from intrusions into, and withdrawals from, the executive self.

Typically, even in DID, much of the personality system is often structured and functions at the level of OSDD (Other Specified Dissociative Disorder). The OSDD diagnosis has a number of subtypes in DSM-5 (American Psychiatric Association, 2013), but the most common one clinically is partial forms of DID in which the ego states are not as discrete, there is no full switching of executive control, and/or no full amnesia barriers between sub-selves.

Rather than a full switch, more commonly there is a partial intrusion. A thought, impulse, feeling, memory, arousal state, cognition, sensation, voice (Longden et al., 2012), or other psychic function intrudes into the executive self from one of the other dissociated modules. Inversely, there are withdrawals of thought, feeling, memory, motor control, or other functions from the executive self. It is these intrusions and withdrawals that unify a broad range of DSM-5 symptoms within a modified structural dissociation model.

The personification and elaboration of sub-selves in DID receives too much emphasis from both believers and non-believers in the disorder (Ross, 1997, 2007a). The core consideration is not whether the different sub-selves have separate names, ages, and illusions of separateness. Rather, the core consideration is the frequency, intensity, and types of intrusions that occur, and the amount of dysfunction and subjective distress they cause. In contrast to the theory of structural dissociation of the personality, an EP need not be present for thoughts, feelings, and impulses to intrude from a dissociated compartment. This means that an EP need not be present in all cases of dissociative schizophrenia; the symptoms can still be understood as intrusions from a dissociated compartment of the psyche, and there is a continuity between the dissociative structure and processes in DID and those in dissociative schizophrenia. This is consistent with the extensive overlap in symptoms between DID and schizophrenia, and the inability of DSM-5 criteria, structured interviews, and self-report measures to sort DID and schizophrenia into two discrete categories with no overlap.

The Dissociative Subtype of Schizophrenia

The dissociative subtype of schizophrenia is described at greater length elsewhere (Ross, 2004). There are two approaches to the differential diagnosis of DID and schizophrenia in DSM-5: diagnose one disorder but not the other; or, diagnose both disorders. DID is not mentioned in the section of DSM-5 on schizophrenia, but schizophrenia is discussed in the section on differential diagnosis of DID. The discussion in the DID text provides only general guidelines but no operationalized rules for how to differentiate between DID and schizophrenia. This is left up to clinical judgement.

In clinical practice, few if any experts in schizophrenia consider DID in their diagnostic assessments (Tschoeke & Steinert, 2010). Within the dissociative disorders field, by and large, DID and schizophrenia are viewed as separate disorders and the problem is to decide which is present. A diagnosis of DID leads to a primary treatment of psychotherapy with adjunctive medication. A diagnosis of schizophrenia leads to a primary psychopharmacological treatment of schizophrenia, with either adjunctive or, often, no psychotherapy.

There are several unresolved problems, however. The DSM-5 diagnostic criteria for schizophrenia state that only two symptoms are required, one of which must be delusions, hallucinations, or disorganized speech (p. 99). The other DSM-5 criteria are a duration of six months and a deterioration in occupational or social function. There are also two exclusion criteria, for schizoaffective disorder and mood disorder and for substance/general medical condition. An additional exclusion criterion states that in a person with autism, either delusions or hallucinations must be present in order to make an additional diagnosis of schizophrenia. Most people with DID almost meet DSM-5 criteria for schizophrenia because they experience auditory hallucinations, the disorder

is chronic, it interferes with function, and the exclusion criteria are not met. If the belief that other people live inside one's body was classified as a delusion, as it could be based on the DSM-5 definition of delusions (p. 819), then most people with DID would meet the criteria for schizophrenia.

There may be a small group of clinicians with expertise in DID who can differentiate DID from schizophrenia reliably, based on clinical experience and personal judgement, although this has never been demonstrated scientifically. However, outside this small group, if it exists at all, there is confusion and lack of knowledge. Following the DSM-5 rules for either DID or schizophrenia does not resolve the problem. This confusion has been present since Bleuler coined the term 'schizophrenia' and is evident in Bleuler's text.

There are folklore-based criteria for differentiating DID from schizophrenia. Examples are whether voices are inside the head (DID) or outside the head (psychosis), the 'knowledge' that schizophrenia is a genetic brain disease while DID is a trauma disorder, clinical judgement, and counter-transference intuition. None of these has any demonstrated reliability or validity (e.g. Dorahy et al., 2009; Honig et al., 1998).

The proposed dissociative subtype of schizophrenia serves several purposes, whether or not it is ever incorporated into the DSM system. The dissociative subtype of schizophrenia is an operationalized, scientifically testable hypothesis; therefore, either believing or disbelieving in it on ideological grounds is not germane to the problem at hand. The proposed DSM diagnostic criteria are:

> A type of schizophrenia in which the clinical picture is dominated by at least three of the following
>
> 1) dissociative amnesia
> 2) depersonalization
> 3) the presence of two or more distinct identities or personality states
> 4) auditory hallucinations
> 5) extensive comorbidity
> 6) severe childhood trauma.

The requirement for a trauma history is not absolute because, in principle, some cases of dissociative schizophrenia could be genetic or physiological in origin. Also, the relationship between trauma, dissociation, and psychosis is multi-faceted and complex: the type of trauma contributing to dissociative schizophrenia, and the degree of contribution of any given type of trauma when it is present, likely vary from case to case and from population to population (Perona-Garcelan et al., 2010; Ross, 2007b; Ross & Keyes, 2004, 2009; Şar et al., 2010; Schäfer et al., 2012; Vogel et al., 2009). In practice, however, almost everyone with DID will meet criteria for dissociative schizophrenia. The criteria are set up this way on purpose.

By current DSM rules, a clinician will have the option of diagnosing DID, schizophrenia, or both. The purposes of the proposed dissociative subtype of schizophrenia are to help schizophrenia experts recognize that dissociative symptoms are common in schizophrenia, to stimulate consideration of DID in the differential diagnosis of schizophrenia, to open up the possibility of a trauma-driven subtype of, or a trauma contribution to schizophrenia, and to open up the possibility of trauma-informed psychotherapy for a subgroup of people with schizophrenia. The purpose of broadening the structural

dissociation model to include dissociated compartments that do not house an EP, or a second apparently normal part (ANP), is to get clinicians and researchers to consider the possibility that the psychological structure and processes in DID and a subset of cases of schizophrenia are similar, if not the same.

In my view, it is not an attainable short-term goal to get the schizophrenia field to consider DID in its differential diagnoses and research. It is only possible to get there, if at all, in a series of steps. The dissociative type of schizophrenia provides an initial step, couched in DSM language, and formulated as a research-based, testable scientific hypothesis. Simultaneously, I believe that dissociative schizophrenia is a scientifically valid category. Indeed, it is the most common presentation in Bleuler's 1911 text (Bleuler, 1950).

Dissociative schizophrenia fits into my broader conception of dissociative disorders, as do the Schneiderian first-rank symptoms of schizophrenia (Kluft, 1987). Auditory hallucinations, thought insertion, thought withdrawal, thoughts ascribed to others, and made thoughts, feelings, and impulses are all intrusion and withdrawal symptoms. They cannot occur unless there is a dissociated module that is disconnected from the host executive self, but they may not necessarily require the presence of an EP. The dissociation is simultaneously psychological in nature and a dissociation between brain modules and neural net subsystems. It can be studied at both levels, and dissociation between brain subsystems can be driven by psychological trauma, traumatic brain injury, infection, defective genes, or, in principle, any aetiological factor or set of factors.

Thought broadcasting and delusional thinking, in this model, are cognitive errors and/or magical thinking by child part-selves that intrude into the executive self. Rather than being fixed and organic in nature, delusions in dissociative schizophrenia are treatable with cognitive therapy and techniques derived from the DID treatment literature. The psychotherapy of DID, OSDD, and dissociative schizophrenia are basically the same, and this is true of all disorders accounted for by the model.

For instance, the model predicts that a subtype of OCD, but not all cases, is treatable with psychotherapy that involves formation of a treatment alliance with dissociated part-selves. The part-selves or subsystems do not have to be fully personalified alter personalities, or EPs, in order to be engaged in integrative psychotherapy.

Laferre-Simard et al. (2014) have studied the dissociative subtype of schizophrenia in an empirical research project. They administered several scales and structured interviews to a carefully diagnosed group of 15 individuals with a psychotic disorder scoring above 15 on the Dissociative Experiences Scale (DES) (Bernstein & Putnam, 1986); these 15 participants were selected out of an initial sample of 50 (35 of whom scored below 15 on the DES). They found that 24% of these 15 patients met the Ross (2004) criteria for dissociative schizophrenia, demonstrating that the criteria do apply to a subset of cases.

A Clinical Case Example of Dissociative Schizophrenia

A clinical case example illustrates how DID and schizophrenia are not simply dichotomous categories:

> Alice Elizabeth H. is a 35-year-old, unemployed, single mother of a 16-year-old daughter. She lives with her divorced mother and daughter in her mother's house in a small town in the southern United States. Alice has a history of childhood

sexual abuse and of severe substance abuse during adolescence and adulthood, which has been in remission for five years.

She had been admitted to a hospital-based trauma program a year earlier where she received treatment for PTSD and depression. The prior diagnosis of PTSD is consistent with there being a structural dissociation of her personality. During this admission she identified herself as 'Alice' and exhibited no switching to other identities. She did not report any amnesia for events inside the hospital.

When she was readmitted, Alice identified herself as 'Betty' and denied that she had identified herself as 'Alice' during her previous admission. Thus, she presented with both identity alteration and amnesia for having identified herself by a different name. She did remember the previous admission in general, however. She had been raped by an acquaintance nine months earlier. Three weeks later, she started dating a famous Hollywood actor and she, her mother, and her daughter were now living in his house in Los Angeles, according to her report. She was annoyed by the fact that her mother and daughter insisted that they still lived in the mother's house. Mother and daughter also denied ever meeting the famous boyfriend.

When I worked with Betty for an hour in a cognitive therapy group, I was aware of the uncertainty in the treatment team as to whether she was 'psychotic' or 'dissociative'. She certainly had a bizarre delusion and she met DSM-IV criteria for schizophrenia (American Psychiatric Association, 1994), which were in effect at the time; she also would have met the DSM-5 criteria. She did not exhibit any severe disorganization of thought or speech and was able to participate in the therapy session effectively.

Betty said that her boyfriend's home in Los Angeles was identical to her mother's home, down to the paint on the walls. She said that the two houses must have the same builder. She was also uncertain whether the hospital was in Texas or California (it was in Texas). I asked her to look out the window and she agreed that this did not look like California. I asked her how she got to the hospital, and she said she had driven in her car from California; however, she could not remember the drive.

At this point, it seemed possible that Betty was an alter personality living with her famous boyfriend in an internal fantasy world. If this was the case, then likely Alice had driven to the hospital (though not from California), and Betty had amnesia for this period of time. If, on the other hand, 'Betty' and the boyfriend were better understood as psychotic delusions, one might assume that psychotherapy for the delusional thinking could not work in a single session. Similarly, the diminished emotional expression could be viewed as a negative symptom of schizophrenia or as a withdrawal symptom based on structural dissociation; the DSM-5 criteria cannot differentiate these two possibilities.

Betty further explained that even the furniture in her boyfriend's house was identical to the furniture in her mother's house. I reviewed with her the odds that she would meet a boyfriend in California who by random chance lived in exactly the same model of home with exactly the same paint scheme – this was possible, but highly unlikely. Having exactly the same furniture set in exactly the same places made the odds infinitesimal.

Betty agreed that this was a logical analysis of the facts, but she was still convinced that there were two identical houses. I then talked with her about her car

trip to the hospital a little more, and she mentioned that she had just gotten her license plates renewed; they were the plates of her home state, not California, though she claimed to have been living in California for the last eight months.

Additionally, I asked her if she had talked to her mother on the phone during her current admission. She had. I then asked her what area code she dialled; it was her home state, not California. I then proposed to her that a much simpler explanation of the facts was the theory that there was only one house, her mother's house, not two identical houses. This would explain why the houses were identical, why she did not have California license plates on her car, why she could not remember driving to the hospital from California, why she had dialled her home state area code, and why her mother and daughter denied living in California.

Betty considered this and accepted that it must be true that there was only one home. She then happily exclaimed, 'So [her famous boyfriend] lives at my mother's house!'

Earlier Betty had told me that her life in California was 'perfect'. After she dropped the delusional belief in two houses, I said that I thought her life in California was a fantasy she was using to keep herself away from a sad life in her home state. I reconfirmed that the idea of two houses was delusional, but did not challenge her on the reality of her famous boyfriend living at her mother's house. I told her that her accepting that there was only one house was an important step, and pointed out that a lot of confusion would evaporate as a result. Also, she wouldn't have to argue with her mother and daughter about which state they lived in.

Finally, I reviewed the sequence of events and reconfirmed that she had met her famous boyfriend three weeks after being raped. I didn't comment any further on the defensive function of the 'delusion' because I judged that it was unwise to push her too far too fast.

In less than an hour, however, I had dismantled a 'fixed' delusion that there were two houses, and that she had been living in the one in California. The treatment staff would follow up with further gentle, paced analysis of whether the relationship with the boyfriend existed in the outside world or only in an inside fantasy world. Betty agreed with treatment staff the next day that she was really Alice and had been using her middle name to create distance from her life as Alice. It appeared that 'Betty' was a defensive device but not a full alter personality. The effect of the cognitive therapy session, in terms of structural dissociation of the personality, was to erode the barrier between Betty and Alice, and to foster a shift of executive control back to Alice. In a subsequent admission several years later, Alice identified herself as Alice and appeared to have a very patchy recall of having claimed to be Betty. The 'delusional' aspect of her presentation in 2007 could be viewed as a transient form of structural dissociation of the personality, akin to a fugue state.

What are the implications of this case? One could conclude that schizophrenia is the correct diagnosis, since she in fact met DSM-5 criteria for the disorder. One would then be forced to conclude that a 'fixed' delusion caused by a biological brain disease, schizophrenia, can be reversed with an hour of psychotherapy. If the 'delusion' of the boyfriend evaporated in response to further psychotherapy, then the DSM-5 entity of schizophrenia would have gone into remission in response to psychotherapy.

Alternatively, one could conclude that the correct diagnosis is OSDD. In that case, the 'psychosis' would be called 'dissociation', the 'delusional thinking' would become 'magical thinking' or 'dissociative fantasy', and the response to psychotherapy would be viewed as unremarkable.

The problem is, as I have argued, the fact that neither structured diagnostic interviews nor self-report measures can make this diagnostic distinction in a valid and reliable fashion. Alice's diagnosis of schizophrenia is not simply a false-positive. It is a true positive because it meets DSM-5 criteria. There is no scientifically valid way to establish that the diagnosis of schizophrenia is a false-positive in this case. Clinical experience and judgement can solve the problem only in a tautological fashion: 'this is a case of DID or OSSD because I say so and because "psychosis" does not respond to psychotherapy in that way'.

What if I had pushed too hard, however, and Alice had decompensated into more florid psychosis? What would that prove? One could conclude that the psychological defences had become more entrenched and desperate in response to the challenge, or one could conclude that psychotherapy makes schizophrenia worse. If the latter, one could start an antipsychotic medication and withdraw the psychotherapy.

If Alice then improved, what would we conclude? Was it the medication or the removal of the threat posed by the therapy that reduced the level of symptoms? The problem is how to sort these possibilities out in a valid, reliable, teachable, and replicable scientific fashion, rather than on the basis of tautology and 'clinical wisdom'. The theory of dissociative schizophrenia translates this problem into an operationalized, testable scientific hypothesis, which is its primary function.

Research Data Supporting the Existence of Dissociative Schizophrenia

The research base supporting the existence of dissociative schizophrenia is reviewed elsewhere (Laferre-Simard & Lecomte, 2010; Laferre-Simard et al., 2014; Ross, 2004). There are several basic findings in the literature, most of which have been replicated. In different case series, between 25 and 50% of people in treatment for DID have received prior diagnoses of schizophrenia from other clinicians, and about half have been prescribed antipsychotic medication (Ross, 1997, 2004). This shows that many of the same people have schizophrenia or DID, depending on who is doing the diagnostic assessment.

The confusion is not limited to clinical practice, however. Structured interviews for dissociative disorders have diagnosed complex, chronic dissociative disorders in 24% or more of people with long-term, stable clinical diagnoses of schizophrenia (Ross, 2004). For example, Haugen and Castillo (1999) diagnosed DID or DDNOS in 28% of 50 psychotic out-patients at a community mental health centre in Hawaii using the SCID-D. Steinberg, Cicchetti, Buchanan, Rakfeldt, and Rounsaville (1994), reported that 32.1% of 28 individuals with psychotic diagnoses reported moderate or severe identity alteration on the SCID-D. Yu et al. (2010) made clinical diagnoses of a dissociative disorder in 29.2% of 96 individuals with schizophrenia. Ross and Keyes (2004) diagnosed DID in 26.4% of 60 patients with schizophrenia they interviewed with the DDIS (see Chapter 11 of this book for a detailed discussion of this literature).

Reciprocally, two-thirds of people in long-term psychotherapy for DID meet structured interview criteria for schizophrenia or schizoaffective disorder (Ross, 2004).

Similarly, a subgroup of people with schizophrenia have high scores on self-report measures of dissociation and people with DID, on average, score higher on measures of psychosis than do people with schizophrenia.

The available data show consistently that neither clinicians, DSM-IV or DSM-5 diagnostic criteria, structured interviews, nor self-report measures can adequately separate DID and schizophrenia into two dichotomous categories. Clinicians on both sides of the DID/schizophrenia divide commonly believe that they can make reliable and valid differential diagnoses, but this is not true. It cannot be true because the core features of the two disorders are the same; Schneiderian first-rank symptoms of schizophrenia are more characteristic of DID than of schizophrenia.

Research and Clinical Implications of Dissociative Schizophrenia

The clinical implications of dissociative schizophrenia are the following: (i) dissociative symptoms are common in schizophrenia and must be considered in treatment, (ii) some cases of schizophrenia may be treatable with psychotherapy, (iii) the environment can be the major aetiological factor in many cases of schizophrenia, and (iv) psychological trauma is a major theme in schizophrenia.

In the current ideological climate, the pendulum has swung from the extreme of the schizophrenogenic mother to the opposite extreme; it is now politically forbidden to 'blame' or 'stigmatize' the family. Why it should be politically unacceptable to blame a physically violent, inconsistent, emotionally neglectful, and sexually abusive parent for his or her adult child's mental health problems is unclear.

The research implications of dissociative schizophrenia are the following: (i) measures of trauma and dissociation should be included in most research on psychosis, (ii) dissociative symptoms may define a valid subtype of schizophrenia with a distinct treatment response, (iii) psychological trauma should be controlled for in all twin, family, adoption, and genetic studies of psychosis, and (iv) a truly integrated biopsychosocial model of schizophrenia is possible, one that pays more than lip service to psychosocial factors in aetiology, phenomenology, nosology, and treatment.

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21

Advances in Clinical Assessment

The Differential Diagnosis of Dissociative Identity Disorder and Schizophrenia

Marlene Steinberg

Dissociative disorders are characterized by 'a disruption of and/or discontinuity in normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behavior' (DSM-5, American Psychiatric Association, 2013). Considered post-traumatic syndromes, the dissociative symptoms and disorders are more common than previously recognized. Extensive research over the past several decades has established that Dissociative Identity Disorder (DID) is: (i) relatively common in out-patients and in-patients (prevalence rates ranging between 1 and 10%), (ii) frequently unrecognized for many years while a person seeks treatment, and (iii) often misdiagnosed as a psychotic disorder (or sometimes only the presenting co-morbid disorder is recognized, such as an affective, anxiety, substance use, or personality disorder; Aderibigbe, Block, & Walker, 2001; Allen, 1995; Bliss, Larson, & Nakashima, 1983; Chu, 1996; Gast, Rodewald, Nickel, & Emrich, 2001; Ginzburg, Somer, Tamarkin, & Kramer, 2010; Kluft, 1985a, 1985b, 1987, 1995; Mueller, Moergeli, Assaloni, et al., 2007; Putnam, Guroff, Silberman, Barban, & Post, 1986; Şar, Tutkun, Alyanak, Bakim, & Baral, 2000; Şar, Koyuncu, Ozturk, et al., 2007; Spiegel, 1993; Steinberg, 1995; Steinberg, 2000a; Steinberg & Schnall, 2001; Van der Hart, 1993).[1]

The misdiagnosis of patients with DID as having a psychotic disorder, including schizophrenia, is typically due to: (i) the overlap of isolated symptoms, including the presence of 'voices'; (ii) misinformation about DID; (iii) lack, until the 1980s, of reliable diagnostic tools for dissociative symptoms and disorders; and (iv) misclassification based upon commonly used evaluative measures which are insensitive to the existence of a dissociative disorder (Allen & Coyne, 1995; Bliss, 1984; Coons, 1984; Kluft, 1984, 1995; Steinberg, Barry, Sholomskas, & Hall, 2005). Misdiagnosis of DID as a psychotic disorder is not a benign misclassification; research indicates that DID patients previously diagnosed with schizophrenia had a history of more hospitalizations, more self-mutilation, and more suicide attempts than those with DID who had never been diagnosed as psychotic (Putnam et al., 1986; Ross & Norton, 1988). Accurate and early diagnosis of DID is particularly important given that individuals with DID usually respond well to specialized psychotherapy and do not require chronic use of

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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antipsychotic medication, in contrast to schizophrenia (Coons & Bowman, 2001; Kluft, 1984, 1999; Myrick et al., 2017; Steinberg & Schnall, 2001).

Commonly used screening tools have demonstrated weaknesses in differentiating psychosis from dissociation. For example, patients with dissociation demonstrate high SCL-90 scores on the psychoticism and paranoid ideation scales. Clinicians should be aware that elevated psychoticism scales may reflect underlying dissociative rather than psychotic-spectrum disorders (Allen & Coyne, 1995; Derogatis, 1994; Moskowitz, Barker-Collo, & Ellson, 2005; Steinberg et al., 2005). With the development of specialized diagnostic tools for the dissociative disorders, research has documented the essential features of these disorders, establishing dissociative pathology as distinct syndromes that can be reliably differentiated from other disorders. As a result of such standardized instruments, we can now more reliably differentiate symptoms and features of DID from those occurring in schizophrenia.

This chapter is intended to help mental health professionals become familiar with distinguishing dissociative disorders from schizophrenia based on systematic research using standardized tests. Several dissociative screening and diagnostic instruments will be reviewed for their contribution to our knowledge of overlapping and distinguishing symptoms between the dissociative and psychotic populations. One diagnostic instrument, the *Structured Clinical Interview for DSM-IV – Dissociative Disorders* (SCID-D), is presented in detail, together with data establishing its ability to differentiate dissociative from psychotic patients (Steinberg, 1994a, 1994b, in press a, in press b; Steinberg, Cicchetti, Buchanan, Rakfeldt, & Rounsaville, 1994).

DID and Schizophrenia: Overlapping/Non-specific Symptoms

Individuals with schizophrenia and DID experience some of the same symptoms, with these shared symptoms referred to here as 'overlapping symptoms'. Particularly noteworthy are the so-called 'Schneiderian' or 'first-rank' symptoms (Schneider, 1959). These symptoms include audible thoughts, voices arguing, voices commenting, influences playing on the body, thought withdrawal, thought insertion, thought broadcasting, 'made' feelings, 'made' impulses, and 'made' volitional acts (see Chapter 4 of this book).

Originally thought to be unique to schizophrenia, research indicates that first-rank symptoms are quite common in individuals with DID (Kluft, 1987; Laddis & Dell, 2012a; Moise & Leichner, 1996; Ross, Miller, Reagor, Bjornson, & Fraser, 1990; Chapter 12 of this book). Diagnostic confusion can be exacerbated due to the continued misperception that hearing voices is unique to psychotic disorders. Recent investigations note that a variety of factors associated with auditory hallucinations fail to distinguish the voices which occur in dissociative disorders from those in psychotic disorders. These non-specific factors include whether the voices are perceived as originating inside versus outside of one's self, whether voice content is incongruent with mood, or whether the overall content of the voices is reported to be supportive or destructive (Copolov, Trauer, & Mackinnon, 2004; Dorahy, Shannon, Seagar, et al., 2009; Honig et al., 1998; Moskowitz, 2012; Moskowitz & Corstens, 2007; Pilton, Varese, Berry, & Bucci, 2015; Chapter 13 of this book).

Instruments that inquire about patient experiences in great detail have more success in identifying possible distinguishing symptoms. Using a comprehensive instrument assessing auditory hallucinations, Dorahy et al. (2009) found that persons with DID were more likely than a schizophrenia group to experience visual, tactile, and olfactory hallucinations, report hearing both adult and child voices, and have the onset of voice hearing before age 18, suggesting that the presence of these factors can be used to consider an 'increased likelihood' of DID. In addition, clinician-administered diagnostic interviews such as the SCID-D, which allow for extensive patient elaborations, have successfully identified distinguishing features of seemingly overlapping symptoms in DID and schizophrenia (discussed below; Steinberg, 1994a; Steinberg et al., 1994; Welburn, Fraser, Jordan, et al., 2003).

Assessment of Dissociation in DID and Schizophrenia

Routine identification of dissociative symptoms requires systematic screening of dissociation in all patients who present for evaluation. Failure to screen for dissociation increases the likelihood of misdiagnosis, potentially lasting for years, along with associated suffering. Screening tests for dissociative symptoms are useful for detecting persons at risk of having a dissociative disorder. However, a diagnosis of a dissociative disorder requires further specialized clinical evaluation and/or standardized diagnostic tests for dissociative disorders. Commonly used screening and diagnostic tests for dissociation that have been used in numerous psychotic and dissociative populations are reviewed in this section.

A Screening Test: The Dissociative Experiences Scale (DES)

Screening tests are self-administered instruments intended to provide a preliminary screen for particular symptoms and diagnoses. The DES is a self-report scale that allows clinicians to rapidly screen for pathological dissociation. The DES assesses the frequency and type of dissociative experiences a person has had in their life. Many studies report good to excellent reliability and validity for the DES (Bernstein & Putnam, 1986; Carlson & Putnam, 1993; Frischholz et al., 1990; Van IJzendoorn & Schuengel, 1996).

The Dissociative Experience Scale contains 28 items. The DES uses a 100 mm analog line, while the DES-II uses an 11-point response format from 0 to 100%. Total scores, the average of the scores on all 28 items, theoretically range from 0 to 100; cut-off scores varying from 12 to 30 (and above) have been recommended to indicate patients possibly suffering from a dissociative disorder (Bernstein & Putnam, 1986; Carlson & Putnam, 1993; Draijer & Boon, 1993; Mueller-Pfeiffer, Rufibach, Wyss, et al., 2013; Steinberg, Rounsaville, & Cicchetti, 1991). In addition, 8 DES items, referred to as the DES taxon or DES-T have been found to correlate with psychopathological levels of dissociation (Waller, Putnam, & Carlson, 1996.)

With respect to the differentiation of DID from schizophrenia, studies have found that persons with DID have significantly higher scores on the DES than persons with schizophrenia (Bernstein & Putnam, 1986). The degree of dissociation in persons with schizophrenia correlates with emotional and physical abuse (Dorahy et al., 2009; Holowka, King, Saheb, Pukall, & Brunet, 2003; Schäfer et al., 2006, 2012). Similar

correlates between abuse and dissociative symptoms have been noted in persons with dissociative disorders (Allen, 1995; Chu, 1996; Goodwin, 1988; Kluft, 1987, 1995; Nijenhuis, Spinhoven, Van Dyck, Van der Hart, & Vanderlinden, 1998).

While patients without a psychotic disorder are noted to have relatively stable DES scores, patients diagnosed with schizophrenic spectrum disorders have been found to vary in DES scores ranging from mean scores of 10 to 30 (in different studies). The variable DES score may be related to whether the patient is evaluated during an acute psychotic phase of their illness or once they have been stabilized (Schäfer et al., 2012). For example, Schäfer et al. (2012) evaluated 145 patients with schizophrenic spectrum disorders at admission on an in-patient unit and again 3 weeks later. They found that dissociative symptoms as measured by the DES decreased significantly following 3 weeks of in-patient treatment and concluded that dissociative symptoms appear to be state-dependent in this population. Further research is needed to better understand reasons for this observed decrease in DES scores. Because of the significant state-dependent variability of DES scores in this population, Schäfer et al. (2012) recommended that diagnostic interviews for dissociative disorders, in addition to the DES, be used to 'avoid measurement artifacts' in patients with schizophrenic spectrum disorders.

A Screening Test: The Somatic Dissociation Questionnaire (SDQ-20)

The SDQ-20 is a self-report tool evaluating somatoform dissociation, which refers to dissociative symptoms that involve the body (such as sensory loss or loss of control over one's body) but which cannot be accounted for by a medical condition, drugs, or alcohol. The SDQ-20 consists of 20 items rated on a five-point Likert-type scale. Total scores range from 20 to100 (Nijenhuis, Spinhoven, Van Dyck, Van der Hart, & Vanderlinden, 1996).

For all SDQ-20 items, the person is asked to indicate whether their bodily symptom is related to a physical disease. However, if used for research purposes, Nijenhuis et al. (1996) recommends that the researcher not adjust the score of items if the patient attributes the cause to physical disease, as the patient's interpretation often may not be accurate. If used for clinical purposes, when physical illness is confirmed by the physician who diagnosed the medical condition, the SDQ authors suggest that item scores be adjusted to indicate that the symptom does not apply to the patient. When used for research purposes, the SDQ-20's test–retest reliability and convergent validity are reported as satisfactory.

Patients with dissociative disorders have significantly higher scores on the SDQ-20 (mean score of 51.8) than patients with other psychiatric disorders (including schizophrenia, mean score of 27.1). SDQ scores have been found to correlate with early onset and prolonged abuse in patients with dissociative disorders, compared to patients with other disorders. This is consistent with research linking severe dissociative disorders to early and severe abuse or traumas (Nijenhuis et al., 1996, 1997).

A Screening Test: The Multidimensional Inventory of Dissociation (MID)

The MID is a self-report tool of pathological dissociation containing 218 items, which is reported to assess 14 facets of dissociation and 23 symptoms of dissociation (Dell, 2006; Somer & Dell, 2005). For each item, the MID uses an 11 point frequency response

scale from 0 (Never) to 10 (Always). The person is asked to rate 'how often' they experience each item when they are not using alcohol or drugs (similar to the prompt in the DES). While the MID was initially presented as a diagnostic tool for dissociative disorders, recent psychometric analyses indicate that it functions better as a screening tool, with similar false-positive and false-negative characteristics to that of the DES and SDQ-20 (Gingrich, 2009; Mueller-Pfeiffer et al., 2013).

Laddis and Dell (2012b) assert that 'current measures of dissociation cannot distinguish between the symptoms of DID and the "dissociative-like" symptoms of schizophrenia', citing two studies using the structured interview DDIS which showed large overlap in dissociation scores between the DID and schizophrenic study groups. While Laddis and Dell's statement may be true of highly structured interviews such as the DDIS, and certainly true of self-administered screeners, numerous studies indicate that the clinician administered semi-structured SCID-D can differentiate between DID and schizophrenic populations by identifying both quantitative differences (severity/frequency) as well as qualitative differences that distinguish dissociative symptoms in DID from those seen in patients with psychosis (Boon & Driajer, 1993; Haugen & Castillo, 1999; Steinberg et al., 1994; Welburn et al., 2003). Using assessment methods that have a demonstrated ability to diagnostically distinguish between DID and schizophrenic patient populations is the first step in isolating any distinct pathophysiology between the two disorders (Şar & Ross, 2006).

A Structured Diagnostic Tool: The Dissociative Disorders Interview Schedule (DDIS)

The DDIS is a structured interview that diagnoses dissociative disorders, borderline personality, major depression, and substance abuse. Diagnosis of the dissociative disorders is based on items that ask the patient whether or not they endorse each disorder's DSM criteria. Given the DDIS's yes/no/unsure response set, a patient's 'yes' endorsement of three questions corresponding to DSM-IV's DID diagnostic criteria, along with one 'no' response to exclusion criteria, results in a diagnosis of DID. In the original published study, the inter-rater reliability of the diagnosis of DID using the DSM-III-R version of the DDIS was good, with a kappa = 0.68 (Ross, Heber, Norton, Anderson, & Barchet, 1989).

Studies using the DDIS in schizophrenic populations have explored the frequency of overlapping symptoms of schizophrenia and DID particularly with respect to Schneiderian symptoms. Once thought to be specific to schizophrenia, these symptoms are now considered non-specific and their presence or absence does not provide information that allows the clinician to distinguish dissociative symptoms in patients with dissociative disorders from psychotic disorders. Not only were patients with DID found to have Schneiderian symptoms, they endorsed more positive symptoms of schizophrenia than schizophrenic patients (Kluft, 1987; Ross et al., 1990).

A Semi-Structured Diagnostic Interview: The Structured Clinical Interview for Dissociative Disorders (SCID-D)

The SCID-D provides a standardized method for clinicians to identify dissociative symptoms and disorders (Steinberg, 1994a, 1994b, in press a, in press b). It is widely considered to be the 'gold standard' for the diagnosis of dissociative symptoms and

disorders and for testing the dissociative properties of dissociation screening instruments (Allen, 2000; Mueller-Pfeiffer et al., 2013; Putnam & Loewenstein, 2000; Welburn et al., 2003). Based on a clinical model/typology of five core dissociative symptoms (amnesia, derealization, depersonalization, identity alteration, and identity confusion), each of which are capable of being reliably assessed, the SCID-D enables the diagnosis of dissociative symptom severity and disorders in adolescents and adults. The SCID-D's semi-structured format utilizing open-ended follow-up questions elicits elaborate descriptive symptom responses which, if present, support DSM or ICD criteria for the dissociative disorders. The SCID-D also allows the interviewer to evaluate dissociative symptoms present in patients with post-traumatic stress disorder.

Guidelines for the administration, scoring, and interpretation of the SCID-D, including Severity Rating Definitions for systematic rating of dissociative symptoms severity, are described in the *Interviewer's Guide to the SCID-D* (Steinberg, 1994b, in press b.) Guidelines for the SCID-D's use in forensic evaluations and for documenting the detection of malingerers have been published separately (Steinberg, Hall, Lareau, & Cicchetti, 2001; Welburn et al., 2003.)

The SCID-D results include both qualitative descriptive information as well as quantitative scoring of dissociative symptom severity. Researchers in the US and elsewhere (Canada, Germany, Israel, the Netherlands, the Philippines, Switzerland, and Turkey) have verified the SCID-D's psychometrics and distinctive dissociative symptom phenomenology including: (i) excellent overall inter-rater reliability and good discriminant validity for the detection of dissociative symptoms and disorders, (ii) significantly higher dissociative symptom severity scores in patients with dissociative disorders as compared to those with other psychiatric disorders and normal controls, and (iii) virtually identical dissociative symptom severity profiles and symptom phenomenology in cross-cultural studies for patients with dissociative disorders, other psychiatric disorders (including psychotic disorders), and non-clinical controls (Boon & Draijer, 1991; Bowman & Coons, 2000; Chang, Chang, Shiah, & Huang, 2005; Gast et al., 2001; Gingrich, 2009; Ginzburg et al., 2010; Goff, Olin, Jenike, Baer, & Buttolph, 1992; Haugen & Castillo, 1999; Kundakçi, Şar, Kiziltan, et al., 2014; Mueller-Pfeiffer, Rufibach, Perron, et al., 2012; Şar, Akyuz, Kundakci, Kiziltan, & Dogan, 2004; Şar, Onder, Kilicaslan, et al., 2014; Steinberg, 2000a, 2000b; Steinberg, Rounsaville, & Cicchetti, 1990; Steinberg et al., 1990, 1994; Tezcan, Atmaca, Gecici, Buyukbayram, & Tutkun, 2003; Welburn et al., 2003; Yargiç, Şar, Tutkun, & Alyanak, 1998). Recent physiological research has validated the SCID-D's ability to identify those with complex dissociative disorders. For example, a recent study documented that DID patients identified by SCID-D had characteristic brain activity during state switching that could not be duplicated by either fantasy-prone controls or controls trained to fake DID (Reinders, Willemsen, Vos, den Boer, & Nijenhuis, 2012; Reinders et al., 2006).

Distinguishing DID from Schizophrenia: Identifying Diagnostically Distinct Features Based on the SCID-D Interview

Researchers have identified previously unrecognized dissociation in patients with schizophrenia and schizoaffective disorder using the SCID-D. Specifically, 10–28% of patients with schizophrenia or schizoaffective disorder interviewed with the SCID-D

were found to have DID or DDNOS (Boon & Driajer, 1993; Haugen & Castillo, 1999; Steinberg et al., 1994). Further, patients with DID have distinctly different dissociative symptom profiles (higher scores on all five dissociative symptoms) than patients with schizophrenia or schizoaffective disorder. Consistent dissociative symptom profiles have been found in these diagnostic groups in studies conducted in North America and in Europe (Boon & Driajer, 1993; Haugen & Castillo, 1999; Steinberg et al., 1994; Welburn et al., 2003).

Steinberg et al. (1994) studied 50 psychiatric out-patients referred with one of three DSM-III-R diagnoses: schizophrenia (n = 17), schizoaffective disorder (n = 14), and DID (then known as multiple personality disorder, n = 19). Subjects were administered the SCID-D by trained interviewers blind to referring diagnosis. A diagnosis of DID was confirmed in all 19 subjects referred with the diagnosis. Of the 31 subjects referred with diagnoses of schizophrenia or schizoaffective disorder, 3 (10%) met the criteria for DID based on SCID-D assessment. Results indicated that patients with DID (including newly diagnosed DID) had significantly higher dissociative symptom and overall SCID-D scores than patients with schizophrenia/schizoaffective disorder (DID mean = 19.6; schizophrenia/schizoaffective mean = 11.8). All 19 DID subjects reported experiencing recurrent to persistent (moderate to severe) depersonalization, derealization, identity confusion, and identity alteration. No patient in the schizophrenia/schizoaffective group experienced moderate to severe symptoms in all of the four dissociative symptom categories noted in the DID group.

See Figure 21.1 for a summary of SCID-D dissociative symptom profiles for persons with DID, schizophrenia/schizoaffective disorder, and newly detected DID (data from Steinberg et al., 1994).

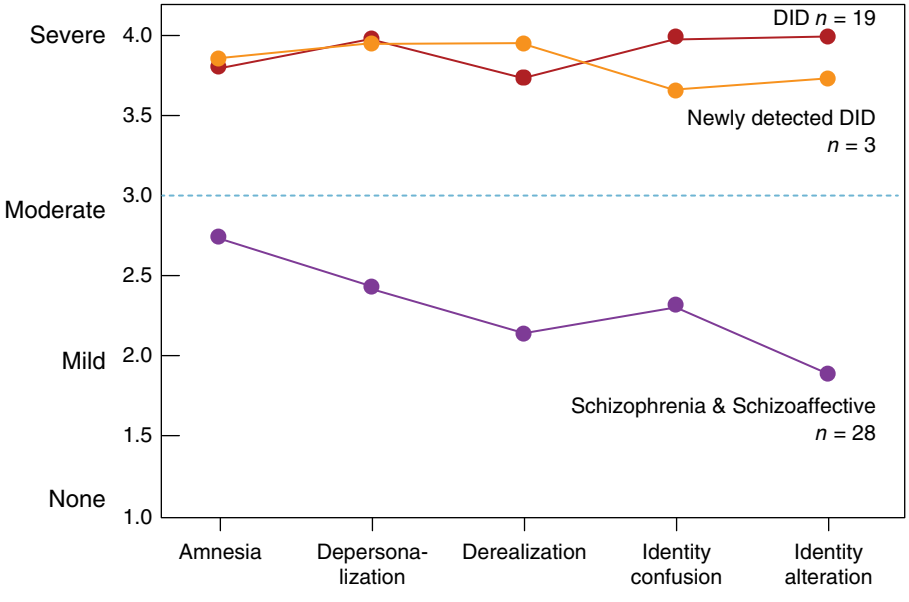

Figure 21.1 SCID-D symptom profile: DID, schizophrenia, and newly detected DID or DDNOS. Based on data from Steinberg et al. (1994).

Welburn et al. (2003) documented that, by using the SCID-D, patients with schizophrenia can be reliably distinguished not only from DID, but also from feigned DID. Consistent with Steinberg et al. (1994), the authors found schizophrenic subjects to have an average SCID-D total score of 11.00, while DID subjects had an average total score of 19.08. Patients with DID had statistically significant higher scores on each of the five dissociative symptoms (amnesia, depersonalization, derealization, identity confusion, and identity alteration) than patients with schizophrenia. Welburn et al. (2003) noted that the SCID-D was 'clearly the most efficacious instrument in discriminating DID from schizophrenia and from feigned dissociation' (p. 124).

In addition to quantitative differences (severity/frequency), analysis of the SCID-D interviews revealed qualitatively distinct distinguishing features of the specific dissociative symptoms for DID as compared to schizophrenia. For example, depersonalization symptoms in persons diagnosed as schizophrenia occurred in the context of psychotic/delusional symptoms or transient identifications with another person (real or mythological). One patient with schizophrenia when asked whether she had ever experienced depersonalization ('Have you ever had the feeling that you were a stranger to yourself?') stated: 'Yes, it sure wasn't me. … One time I thought I was Mrs. Santa Claus, things like that, it was not me.' With respect to identity alteration, schizophrenic subjects reported transient identifications with other people or transient alterations in their own identity, while individuals with DID reported ongoing consistent alterations in their sense of identity, that is the existence of alters each with consistent feelings, thoughts, and/or behaviours. One patient with schizophrenia described her identity confusion and alteration as follows: 'I thought this arm was Jesus and this arm was me and I would hold my hand like this [places left hand on right forearm] to take care of Jesus' (Steinberg, 1994a; Steinberg et al., 1994).

In comparison, DID subjects experienced multiple severe dissociative symptoms while maintaining (relatively) intact reality testing. A characteristic feature of depersonalization exhibited by DID patients in response to SCID-D depersonalization questions was endorsement of depersonalization along with spontaneous elaborations of interactive dialogues between observing and participating self. One DID patient reported 'There's a part of me I call the observer. The observer likes to tell me what I should and should not do.'

There are many qualitative differences between schizophrenia and DID which can be detected by the SCID-D. Persons with DID maintain intact reality testing, and are often aware that the voices they are experiencing are not emanating from outside of themselves but that they may feel 'as if' they are. Voice hearing occurring within the context of intact reality testing was a crucial element to the correct diagnosis in the well-known case of Chris Sizemore ('Eve') (Thigpen & Cleckley, 1954). Most significant to differential diagnosis, the voices associated with DID occur within the context of other dissociative symptoms assessed with the SCID-D, specifically the symptoms of amnesia, depersonalization, derealization, identity confusion, and identity alteration (Steinberg et al., 1994).

In summary, while superficial manifestations of overlapping symptoms such as hearing voices and specific dissociative symptoms may appear similar in DID and schizophrenia, careful examination of dissociative symptoms as assessed by the SCID-D indicate that symptom characteristics (including content, context, severity, and co-occurrence with other dissociative symptoms) and severity of dissociative symptoms differentiate the two disorders (Steinberg et al., 1994).

For a summary of the overlapping and diagnostically distinct symptoms in persons with schizophrenia and DID, see Table 21.1.

Table 21.1 Overlapping symptoms and unique features of schizophrenia and dissociative identity disorder (DID).

Overlapping symptoms potentially present in both schizophrenia and DID	Distinguishing features of schizophrenia	Distinguishing features of DID
Dissociative symptoms	Usually few to occasional dissociative symptoms, and mild to moderate severity ratings on SCID-D dissociative symptoms. Symptoms typically occur in the context of delusions or other psychotic symptoms.	Recurrent to persistent dissociative symptoms and moderate to severe severity ratings on at least three SCID-D dissociative symptoms. Reality testing is typically intact.
	Average total SCID-D score, mean = 11.7	Average total SCID-D score, mean = 19.6
Identity confusion/ disturbance	Lack of sense of identity and one's role in society, or transient uni-dimensional alterations in identity	Recurrent, consistent, multi-dimensional and distinct alterations in one's identity.
Internal dialogues and/or auditory hallucinations	Hallucinations other than the voices of alter personalities.	Dialogues/hallucinations representing conversations between observing and participating self or alters. These voices may be described as similar to thoughts.
Schneiderian symptoms and delusions	Schneiderian symptoms are present. Bizarre delusions, paranoid delusions, and any other delusions that do not involve other personalities (e.g. 'The CIA is out to get me') are common.	Schneiderian symptoms can be present. Delusions if present are typically associated with experiencing alter personalities.
Other symptoms associated with psychosis	Thinking characterized by incoherence or marked loosening of associations.	Generally absent in DID. If present, usually as transient episodes.
	Catatonic behaviour.	Rare in DID.
	Chronic flat affect.	Absent in DID.
Reality testing	Impaired.	Intact reality testing; 'as if' descriptions of 'psychotic-like' symptoms are typical.
Insight	'May lack insight or awareness of their disorder.… Unawareness of illness is typically a symptom of schizophrenia rather than a coping strategy.' (DSM-5, p. 101)	Insight is usually intact.
Comorbid diagnoses	'… if mood episodes have occurred during active-phase symptoms, they have been present for a minority of the total duration of the active and residual periods of the illness.' (DSM-5, p. 99).	Frequently co-exists with mood disorders. Major depression and/or manic episodes may co-exist with the dissociative syndrome.

(Continued)

Table 21.1 (Continued)

Overlapping symptoms potentially present in both schizophrenia and DID	Distinguishing features of schizophrenia	Distinguishing features of DID
Impairment in functioning	'Level of functioning in one or more major areas such as work, interpersonal relations, or self-care is markedly below the level achieved prior to the onset …' (DSM-5, p. 99)	Impairment in functioning can be temporary, with eventual full return to premorbid level of functioning.
Course of symptoms and syndrome	'Continuous signs of the disturbance persist for at least 6 months.' (DSM-5, p. 99)	Signs of the disturbance may be intermittent. Fluctuations in symptoms, mood, and degree of impairment are common.

Source: © Marlene Steinberg. Adapted from Steinberg (1994b).

Summary and Clinical Implications

Patients with dissociative disorders are commonly misdiagnosed as having schizophrenia or schizoaffective disorder. Early detection of dissociative disorders in patients with psychotic presentations is essential for preventing years of misdiagnosis, ineffective treatment, and emotional suffering. Screening questionnaires and highly structured 'yes'/'no' interviews have proved unable to detect unique features capable of differentiating dissociative symptoms in patients with schizophrenia from those with dissociative disorders. In contrast, the SCID-D allows for the detection or exclusion of the existence of a dissociative disorder among the putatively psychotic population and informs on the different phenomenology of dissociative and 'psychotic' symptoms (i.e. voices) through identifying distinct distinguishing features of apparently overlapping symptoms (Haugen & Castillo, 1999; Steinberg, 1994a, 1994b, in press a, in press b; Welburn et al., 2003.) For these reasons, the SCID-D is recommended for the evaluation of persons experiencing psychotic or dissociative symptoms or who present with a history of trauma.

Note

1 The author would like to thank Harold D. Siegel, PhD for his contributions to an earlier version of this chapter (in Moskowitz, Schäfer, & Dorahy, 2008).

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22

A Psychological Assessment Perspective on Clinical and Conceptual Distinctions Between Dissociative Disorders and Psychotic Disorders

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Behaviourally and symptomatically, individuals with dissociative disorders (DD) are often difficult to distinguish from those with psychotic disorders (PD; Dell, 1998; Ellason, Ross, & Fuchs, 1996; Ross et al., 1990). In this chapter, we will review how a range of psychological instruments may inform our understanding of the clinical and conceptual differences between severe DD and psychotic disorders. The severe DDs focused on here will be primarily Dissociative Identity Disorder (DID) and Other Specified Dissociative Disorder ('Dissociative Disorder Not Otherwise Specified', DDNOS, in the DSM-IV and earlier). We will not be considering instruments assessing dissociation or dissociation diagnostic interviews, as those will be reviewed elsewhere (Chapters 11 and 21 of this book, respectively).

Table 22.1 contains a comparison of DD and PD patients on personality and cognitive testing.

Schneiderian first-rank symptoms such as certain forms of voice hearing and experiencing 'made' thoughts and feelings (Schneider, 1959) are more commonly reported in DD patients than in patients with schizophrenia (Dell, 2006; Dell & Laddis, 2012; Kluft, 1987; Ross et al., 1990; Chapters 4 and 12 of this book), even though first-rank symptoms have long been emphasized in the diagnosis of schizophrenia. Some authors suggest that psychotic symptoms may be driven by dissociative mechanisms (Braehler et al., 2013; Moskowitz, Barker-Collo, & Ellson, 2005; Russo et al., 2014) while others go so far as to question whether dissociation is a 'distinct nosological category' from schizotypy (Merckelbach, Rassin, & Muris, 2000). Yet these diagnostic groups are typically offered different treatments, which raises issues of both clinical and theoretical importance.

The diagnosis of dissociative patients is complex. It is crucial to develop a collaborative relationship with severely dissociated patients so that the assessment is therapeutic rather than re-traumatizing. This relationship is not as critical when assessing psychotic patients, unless they have experienced considerable interpersonal trauma. However, once a collaborative relationship has been established, DD clients may report so many symptoms and unusual experiences that they may appear to be exaggerating their symptoms (Brand, Webermann, & Frankel, 2016). As a result, they often provide technically 'invalid' test results based on validity scales and interviews that are meant to detect feigning of psychiatric symptoms but which were developed without recognition

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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Table 22.1 Comparison of dissociative disorder (DD) and psychotic disorder (PD) patients on personality and cognitive testing.

Measure	Comparison between DDs and PDs
Cognitive performance	• No current research directly compares DDs to PDs • DDs: average IQ; no signs of impaired reality testing; some inconsistency within subtests possible, due to different personalities responding • PDs: deficient verbal and delayed memory; low scores on WAIS-R overall IQ and many subscales
Minnesota Multiphasic Personality Inventory	• Many common features; both tend to elevate on Sc. DDs may have higher Sc scores than PDs. • Specifically, if F and Sc both elevated, assess for blatant psychosis to differentiate DD from PD
Millon Clinical Multiaxial Inventory	• Paranoid schizophrenia patients score lower on schizotypal personality pathology, thought disorder, PTSD than do DDs
Personality Assessment Inventory	• No research specifically comparing DDs to PDs on this measure. • The negative impression scale (NIM) cannot be used to predict the validity of DD PAI profiles. • The Rogers Discriminant Function (RDF) and the Malingering Index (MAL) are better at distinguishing malingered from genuine DD.
Structured Interview of Reported Symptoms	• No research specifically comparing DDs to PDs on this measure. • The Trauma Index may be useful in distinguishing malingered from clinical DDs.
Symptom Check List-90	• No research specifically comparing DDs to PDs on this measure. • DDs score higher on psychoticism than non-DDs, but research needed to compare scores to PDs.
Rorschach	• On the whole, DDs more capable of logical, rational thought than PDs • Both DDs and PDs have high levels of misperceptions about others • DDs: higher complex thinking and less oversimplifying of experience than PDs • DID patients have greater collaborative engagement, capacity for self-reflection, interest in others, and ability to modulate emotion than PDs • DIDs show more traumatic intrusions than PDs based on TCI
Trauma Symptom Inventory	• No research directly compares DDs to PDs on this measure. • DDs: high depression, dissociation, intrusive experiences, impaired self-reference subscales • PDs: trauma exposure positively correlated with psychotic symptoms • PDs overall elevate on fewer of the subscales than DDs

or consideration of dissociative disorders. As we will describe, genuine dissociative and trauma-based symptoms may produce such results on many measures and interviews, but these problems are not typical for psychotic patients.

In the following, we will compare the performance of persons with DD against those with PD in four areas of psychological testing or assessment: (i) cognitive testing,

including intelligence tests, (ii) structured personality tests and broad psychiatric symptom measures, (iii) trauma-focused measures, and (iv) projective tests, in particular the Rorschach Inkblot Test.

Cognitive Assessment

Intelligence tests, such as the WAIS-III (Wechsler Adult Intelligence Scale), may be able to clarify whether voice hearing is part of a DD or PD. Compared to a patient with a psychotic disorder, a DD patient's intelligence testing does not show signs of psychotically illogical thinking or impaired reality testing (Armstrong & Loewenstein, 1990). DD patients' IQ results are 'remarkably unremarkable' (Armstrong, 1996); in a sample of 100 DID and DDNOS patients the average IQ in the sample was 100 with normally distributed scores, ranging from mild retardation to superior. No subtest or ability appeared to be particularly strong or weak, although dissociation is described as characterized by disturbances in attention, memory, and consciousness in the DSM-5 (American Psychiatric Association, 2013). Instead, dissociation may sometimes lead to inconsistent performance within subtests rather than a persistent pattern of impaired cognitive functioning (Armstrong, 1996; Guralnik, Giesbrecht, Knutelska, Sirroff, & Simeon, 2007). For example, some individuals give concrete and abstract responses within a single item or within a subtest, which may reflect gaps in learning, occasionally experiencing dissociation during testing or switching among personalities with different levels of cognitive sophistication.

In contrast, patients with schizophrenia typically show low overall and subscale scores on intelligence tests as well as deficits in verbal and delayed memory (e.g. Bozikas, Kosmidis, Kiosseoglou, & Karavatos, 2006; Ilonen, Mattlar, & Salokangas, 1997; Kopald, Mirra, Egan, Weinberger, & Goldberg, 2012). Unfortunately, no studies have directly compared DD patients to psychotic patients on cognitive or neuropsychological testing.

Structured Personality Tests and Broad Symptom Measures

Few studies present the individual profiles of patients with DD and PD on structured personality tests, and only a few studies have compared the profile of DD and PD (as well as malingering DD) on the Millon Clinical Multiaxial Inventory III (MCMI-III), the Personality Assessment Inventory (PAI), the Structured Interview of Reported Symptoms (SIRS), or the Minnesota Multiphasic Personality Inventory 2 (MMPI-2).

Validity Issues

The MMPI-2 incorporates several validity scales, of which the F scale is particularly notable as it is often elevated to such a degree in DD patients that the profile is considered invalid (Brand & Chasson, 2015; Coons & Fine, 1990; Welburn et al., 2003). The F scale was designed to assess whether the individual is exaggerating or overreporting their symptoms, that is, 'faking bad'. Patients with PD more often provide a valid profile on the MMPI, although their scores may also be elevated (Munley, Busby, & Jaynes, 1997).

A similar validity pattern emerges on the MCMI-III, with patients with PD reporting fewer symptoms compared to patients with DD (del Rosario, McCann, & Navarra, 1994). On the other hand, patients with DD commonly provide a profile that would be interpreted as exaggerated, with a low desirability scale (Y) score and elevated disclosure (X) and debasement (Z) scores (Allen, Coyne, & Console, 1997; Welburn et al., 2003).[1]

The Personality Assessment Inventory (PAI) shows an almost similar pattern, with the Negative Impression Scale (NIM) being a poor predictor of validity; however, the Rogers Discriminant Function (RDF) and to a lesser extent the Malingering Index (MAL) may be useful in distinguishing between patients with DD and those feigning symptoms (Rogers, Gillard, Wooley, & Ross, 2012; Stadnik, Brand, & Savoca, 2013).

Although the SIRS has been shown to be valid in outpatient posttraumatic stress disorder (PTSD) samples (Rogers, Payne, Correa, Gillard, & Ross, 2009), elevations are also evident in severely traumatized patients. However, the Trauma Index of the SIRS can successfully distinguish genuine from feigned DD (Brand, Tursich, Tzall, & Loewenstein, 2014; Rogers et al., 2009). Unfortunately, no studies have compared PD and DD on these measures.

Neither the Symptom Checklist-90 (SCL-90) nor the Brief Symptom Inventory (BSI) have incorporated validity subscales. However, patients with DD, but not PD, tend to report high levels of polysymptomatology on these measures (Scroppo, Drob, Weinberger, & Eagle, 1998; Steinberg, Barry, Sholomskas, & Hall, 2005).

Minnesota Multiphasic Personality Inventory

Patients with schizophrenia most commonly endorse the clinical scale 8 (schizophrenia/Sc) and bizarre thoughts (BIZ) subscales (Munley et al., 1997) of the MMPI and MMPI-2. Widening the scope to PD, Dao, Prevatt, and Horne (2008) found that scores on the paranoid, Sc, and BIZ subscales, as well as Goldberg's index,[2] are higher in psychotic patients compared to non-psychotic patients. However, patients with DD also tend to have elevated scores on the Sc scale (i.e. Brand & Chasson, 2015; Coons & Fine, 1990). Elevations on the Sc scale are associated with depression and dissociation in women who have experienced childhood sexual abuse (Elhai, Gold, Mateus, & Astaphan, 2001), suggesting that elevations on the Sc scale may be associated with trauma-related experiences of social isolation and perceived lack of control over one's thinking (Briere & Elliot, 1997; Gregg & Parks, 1995). This is consistent with the notion that many scale 8 items tap characteristics of dissociative trauma survivors, such as impaired affect regulation, somatization, dissociation, and personality changes (Wolf, Reinhard, Cozolino, Caldwell, & Asamen, 2009).

Furthermore, in patients with trauma-related disorders, scores on the MMPI-2 are highly correlated with the Dissociative Experiences Scale, especially scales F and Sc (Allen & Coyne, 1995; Brand & Chasson, 2015). This suggests that the profile of DD and PD share numerous features and that a MMPI profile of a DD patient may easily be mistaken as indicating PD or considered invalid. Therefore, the specific constellation of elevated F and Sc scales should lead to a thorough evaluation of the apparently psychotic symptoms to clarify whether they should be interpreted as a result of PD or DD (i.e. Coons & Fine, 1990; Moskowitz et al., 2005). Furthermore, the only study directly comparing the two groups found patients with paranoid schizophrenia to score lower

than a DID group on the Sc scale, although the study sample size was small ($n = 21$; Welburn et al., 2003). In addition, elevations on the hypochondriasis (HS) scale may be seen in DD but are rarely seen in PD (Bliss, 1984; Coons & Fine, 1990). Finally, Allen and Coyne (1995) note that the K scale (a measure of defensiveness), which at moderate levels is associated with ego strength and competent coping (Friedman, Webb, & Lewak, 1989), is also negatively correlated with Dissociative Experiences Scale (DES) scores, suggesting that poor ego strength and coping capacity are associated with high dissociation.

Millon Clinical Multiaxial Inventory (MCMI)

A study using the MCMI-II (Dell, 1998) found that individuals with DD were characterized by avoidant and self-defeating personality features. However, with increasing severity, patients with DD also showed high levels of borderline, passive-aggressive, schizotypal, schizoid, and even paranoid personality pathology (Dell, 1998). Contrasting DD and paranoid schizophrenia, Welburn et al. (2003) found that patients with paranoid schizophrenia generally scored lower than the DD group on schizotypal personality pathology, thought disorder, and PTSD. Thus, contrary to what might be expected, high scores on the schizotypal and thought disorder scale on the MCMI-III may be more indicative of DD than PD. Taken together, it seems that elevated scores on the schizotypal personality scale are consistently found in DD across different versions of the MCMI, whereas thought disorder as an indicator of DD is only found on MCMI-III. However, endorsement of such experiences may not necessarily reflect genuine illogical thinking or impaired reality testing, as patients may be well aware that these experiences are not real (Lindley, Carlson, & Hill, 2014).

In summary, there seems to be a reasonably consistent pattern of both DD and PD patients reporting high Sc scores using the MCMI, which to some extent is replicated on the MCMI-III on the schizotypal and thought disorder scales (Welburn et al., 2003). There are also some indications of a personality structure characterized by low ego strength and interpersonal difficulties in DD patients (Allen & Coyne, 1995; Dell, 1998). Taken together, it seems that DD patients are often considered to over-report according to validity scales on both the MMPI-2 and the MCMI compared to PD. However, this likely reflects the design of the validity scales as these scales often are consistently high among DD individuals due to them endorsing many dissociative symptoms and unusual responses.

Symptom Checklist-90 (SCL-90) and Brief Symptom Inventory (BSI)

Steinberg et al. (2005) found that patients with DD score higher than non-DD patients on many of the psychiatric symptom subscales of these instruments, including somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, anger-hostility, phobic anxiety, paranoid ideation, psychoticism, and the general symptom index. Moskowitz et al. (2005) showed substantial correlation between the subscales of the SCL-90 and the DES, especially psychoticism and paranoid ideation. The Global Symptom Inventory (GSI), a summary score for the SCL-90, is also clearly elevated in DD patients (Allen, Coyne, & Console, 1996; Brand et al., 2012; Gershuny, Najavits, Wood, & Heppner, 2004; Scroppo et al., 1998). Allen et al. (1996) found significant

correlations between the DES total and all nine BSI scales, except interpersonal sensitivity, in a sample of 75 female complex trauma inpatients. Absorption, which is typically considered the most benign and mild form of dissociation, showed the highest correlation with all BSI scales, although this pattern was not replicated in a sample of college students (Spindler & Elklit, 2003). Moskowitz et al. (2005) also demonstrated different correlational patterns on the SCL-90 across college students and prison inmates. Together these findings suggest that the relationship between dissociative and psychotic symptoms may be somewhat different across populations.

Trauma-focused Symptom Measures

Trauma Symptoms Inventory (TSI and TSI-2)

There is a paucity of research on the TSI/TSI-2 (Gray, Elhai, & Briere, 2010) profiles in patients with DID and PD. The only study of PD patients on the TSI (n = 68) found that, in those with trauma histories, TSI elevations were positively correlated with the severity of hallucinations and delusions (Lysaker & LaRocco, 2008). The PD patients had a mean score of 62.47 (SD = 12.51) compared to a mean score on the Dissociation scale of 81.45 (SD = 9.86) in a sample of hospitalized patients diagnosed with DID (Palermo & Brand, in press); note that the latter study used the TSI-2 whereas the first study used the TSI. Furthermore, compared to the dissociative patients, the PD patients had fewer elevations on clinical subscales, indicating that while many traumatized PD patients struggle with trauma-related experiences, the severity of their traumatic symptoms does not appear to be as pronounced as it is among severely dissociative patients.

Summary

Across all psychiatric symptom scales reviewed, using trauma-related as well as the broader psychiatric symptom instruments, the DD patients tend to report a high level of symptomatology across a range of psychiatric symptoms, including – strikingly – those thought to be associated with psychosis and schizophrenia. Clearly, the traditional approach to these scales will not be useful in distinguishing DD patients from PD patients; indeed, used as designed, many of these scales may lead to inaccurately assessing DD patients as PD patients. In contrast, recognition of the polysymptomatic nature of DD would allow one to see high scores on these instruments as a possible indicator of DD.

Projective Testing with the Rorschach

Traumatized people sometimes provide trauma-related information on projective tests which they have not divulged verbally (Armstrong & Kaser-Boyd, 2004; Viglione, Towns, & Lindshield, 2012). Of the projective tests, we review only the Rorschach here because of its well-validated, reliable scoring systems, which quantitatively capture traumatic intrusions as well as dissociative defences. Projective tests provide

information about a person's reality testing, cognition, views of self and others, and personality structure, which can help to inform diagnostic assessments.

Several studies have demonstrated the efficacy of the Rorschach Comprehensive System (RCS; Exner Jr., 1993) in documenting distinctive personality traits of dissociative patients (Brand, Armstrong, & Loewenstein, 2006; Brand, Armstrong, Loewenstein, & McNary, 2009). Highly dissociative people chronically avoid painful feelings and recollections. The Rorschach is particularly helpful to differentiate a dissociative disorder from malingering when a patient endorses such a high number of items on self-report measures such as the MMPI-2 that the validity of the responses appears questionable, which is common with chronically traumatized patients. It is also useful in distinguishing DD patients from PD patients in that it clarifies the extent of perceptual and cognitive difficulties. For instance, if the patient's responses become idiosyncratic, unusual, or illogical, or if her[3] perceptions distort the blot only when she begins to discuss traumatic stimuli, she is likely showing what Armstrong (2002) calls a 'traumatic thought disorder' rather than a PD. 'Traumatic thought disorder' perceptions occur primarily when traumatic intrusions occur or during time-limited episodes of severe traumatic symptoms. This pattern of response is common among DD patients but not PD patients; PD patients tend not to show such fluctuations.

The Rorschach protocols of DD patients show theoretically predicted differences when compared to patients diagnosed with schizophrenia. A study conducted by Armstrong and Loewenstein (1990) found DD patients had similarly high levels of misperceptions about others (M–) as did the patients with schizophrenia in Exner's (1986) study. However, the DD patients demonstrated greater cognitive complexity[4] and a tendency to become overly involved in complexity[5] compared to the patients with schizophrenia, which was replicated by Scroppo et al. (1998). Consistent with Armstrong's findings regarding high FD responses[6] in DID patients (Armstrong, 1991), Scroppo et al. (1998) found that DID patients were capable of intellectual, albeit painfilled, self-reflection (high FD and V)[7] and concluded that DID is an 'imaginatively based' disorder that relies upon a 'cognitively complex response style'.

Brand et al. (2006) published the first large ($N = 100$) sample of Rorschach data from severe DD (including both DID and DDNOS) patients. Consistent with earlier findings (Armstrong, 1991; Scroppo et al., 1998), the DID/DDNOS patient protocols were characterized by heightened intellectual introspection (high FD) and a very high level of intrusions of traumatic material, which the researchers referred to as traumatic flooding.[8] Despite being able to modulate affect fairly well,[9] the DID/DDNOS patients avoided experiencing affect.[10] The DID/DDNOS group showed high cognitive complexity (low Lambda) with a tendency to become over-involved in experience. In addition, DID/DDNOS patients gave short but complex records. Brand, Armstrong, and colleagues (2006) interpreted these seemingly contradictory findings as indicating that patients attempted to limit the emotions and traumatic associations stirred up by the Rorschach.

Brand et al. (2009) used 67 DID patients from their larger sample of 100 DID/DDNOS to provide direct contrasts to 43 PD patients. The Rorschach profiles of the PD patients came from an inpatient urban hospital and were collected by a different team of assessors; however, both hospitals showed good inter-rater reliability scores for Rorschach variables. Brand et al. (2009) analysed Rorschach variables in groupings related to 'capacity for working alliance', 'ability to reason despite traumatic flooding', and

'complexity of experience'. Compared to the PD patients, the DID patients showed greater interest in collaborative engagement,[11] a greater capacity to be self-reflective (FD), and greater interest in others.[12] The lack of interest in others in the psychotic group is expected given that social withdrawal is a characteristic feature of schizophrenia (American Psychiatric Association, 2013). A high level of social misunderstanding[13] was found in both groups. Traumatic transference is likely to be the source of dissociative patients' misunderstanding of others (Dalenberg, 2000), whereas patients with schizophrenia may have difficulty mentalizing others' beliefs and intentions due to deficits in theory of mind (Bozikas et al., 2011; see also Chapter 7 of this book).

In the area of 'ability to reason despite traumatic flooding', the DID patients gave significantly more traumatized (i.e. TCI) responses than did the PD patients. Furthermore, the effect size for TCI was moderate ($d = 0.49$), suggesting that the greater number of traumatic intrusions was a robust difference. The DID patients showed a greater ability to modulate emotion (CF + C − FC) than the PD patients, suggesting that DID patients can typically think and feel emotion at the same time, which likely helps them cope with interpersonal situations. The reality testing[14] of the DID patients did not differ from the psychotic group. However, the PD patients in the Brand et al. (2009) sample had unusually good reality testing, probably due to including patients with psychotic mood disorders in addition to schizophrenia. In a study by Ilonen et al. (1997), the reality testing of the patients with schizophrenia was more typical, with 75% of the patients with schizophrenia showing poor reality testing (X−% > 0.20) compared to only 28% of the DD patients in Brand et al. (2006). The DID patients in Brand et al. (2009) showed more organized and logical thinking (lower WSUM6) than the PD patients. Brand et al. (2006) found that only 18% of the DID/DDNOS patients scored the minimum of 4 or more points required to diagnose schizophrenia on the SCZI,[15] compared to the 65–85% from various schizophrenic samples who scored at least this high (Exner, 1986; Ilonen et al., 1997).

On variables relating to 'Complexity of Experience', the DID patients showed significantly more complex thinking (Blends/R) and less simplicity of experience (Lambda) than did the PD patients. Consistent with this, only 7% of the DID/DDNOS sample in Brand et al. (2006) gave simplistic responses (Lambda > 0.99) compared to 50% of the patients with schizophrenia studied by Ilonen et al. (1997). This means that DD patients have a greater tendency to get caught up in their complex inner world of associations and emotions and can think in a more sophisticated and nuanced manner than do PD patients.

In summary, DD patients' abilities to think relatively more clearly and logically than psychotic patients, despite traumatic flooding and chronic, severe trauma, suggests that the ability to dissociate may confer some degree of resiliency (Armstrong, 1994). Perhaps because severely dissociative patients were able to use dissociation to protect themselves from continual flooding of overwhelming trauma-based emotion, they may have been able to, at least in select dissociated self-states (also referred to as identity states or alters), interact with others with some degree of positive expectations and emotions. Individuals who are traumatized who do not have the capacity to dissociate may be prone to more cognitive disorganization and/or relationship impairment. Nonetheless, DD patients are prone to significant misinterpretation of their inner and outer reality, particularly related to fears of others hurting them. These findings clearly demonstrate that DD patients are not frankly psychotic as measured by the Rorschach,

despite being frequently misdiagnosed with schizophrenia (Ellason & Ross, 1995; Kluft, 1987; Ross et al., 1990).

Assessment Recommendations for Distinguishing Dissociative Patients and Psychotic Patients

Traumatized people in general can present in testing as flooded with intense affect or as emotionally numb and constricted (Alenberg & Briere, 2017; Armstrong & Kaser-Boyd, 2004; Wilson & Keane, 2004). DD is even more variable and complex than other post-traumatic disorders, partially because PTSD, mood disorders, substance abuse, and/or eating disorders, as well as characterological features, are often comorbid conditions (Ellason & Ross, 1995; Loewenstein & Putnam, 2004). As described above, some DD patients also endorse high levels of apparently psychotic symptoms (Brand & Chasson, 2015; Brand et al., 2006, 2009). However, researchers consistently find that DD individuals are more severely polysymptomatic than psychotic individuals. This is due to disturbances in many different dimensions of functioning, including affect tolerance, dissociativity, interpersonal difficulties, impaired self-functions such as an inability to self-soothe, disturbances of body image and somatization, and post-traumatic cognitive distortions (Putnam, 1997). A similar range of symptoms are typically not seen in psychotic disorders. As a result of the fluctuating comorbid conditions and shifting personality states found in DD, patients' presentations will vary.

To make a reliable differential diagnosis of dissociative disorders versus psychotic disorders, we recommend using a battery tailored to the individual that can capture developmental strengths and weaknesses. A thorough assessment usually begins with a phase of rapport building and a detailed life history, including a trauma history. This is followed by a cognitive test such as the Wechsler Adult Intelligence Scale (WAIS; Wechsler, 1997), a structured and objective personality test with validity scales such as the Minnesota Multiphasic Personality Inventory 2 (MMPI-2; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989), projective personality tests, at least one self-report measure of dissociation, and, last, a structured interview for dissociative disorders.

In many settings, testing involving a battery of measures is not possible. In cases where only one or two tests can be used, we recommend a wide range personality test such as the MMPI-2 or MCMI, and, if many subscales are elevated consistent with the multitude of symptoms described here, at least one additional dissociation-specific test should be administered – such as the DES (see Chapter 21 of this book) or the Multidimensional Inventory of Dissociation (MID; Dell, 2006; Chapter 21 in this book). If trauma is suspected, then using a test that assesses the wide range of symptoms influenced by trauma, such as the Trauma Symptom Inventory-2 (TSI-2; Gray et al., 2010), is often more useful than the MMPI-2, as the polysymptomatic profiles of dissociative patients do not pose the same threat to the validity of trauma-related measures. In addition, as underlying trauma is often overlooked in psychiatric patients (Floen & Elklit, 2007; Mauritz, Goossens, Draijer, & Van Achterberg, 2013), routinely incorporating a brief trauma-related measure such as the TSI-2 may help overcome this problem. Patients with high scores on both the dissociation test(s) and the personality test should be interviewed to determine if they have a DD.

In conclusion, despite PD patients often suffering from mild to moderate levels of dissociative symptoms (see Chapter 11 in this book), and the intriguing theories that have been offered linking dissociation to schizotypy (Merckelbach et al., 2000; Moskowitz et al., 2005), current cognitive and Rorschach data suggest that these disorders are considerably different in underlying personality traits and cognitive functioning. The limited current research suggests that DD patients do not suffer from cognitive and neuropsychological dysfunction to the same degree as PD patients. However, high levels of first-rank symptoms of schizophrenia, combined with elevations on subscales measuring thought disorder and schizotypal personality traits on self-report measures, may lead to DD patients being inaccurately assessed as psychotic. In addition, their high polysymptomatology on self-report measures often results in invalid profiles, but should in some cases be interpreted as a cry for help from a person in overwhelming distress or as the manifestation of the widespread, severe symptomatology associated with chronic developmental trauma. In contrast, PD patients tend to score lower on these clinical and validity scales despite having frank psychosis, including more delusions. To assessors new to severe, complex trauma, it may seem strange that DD patients generally report more symptoms than PD patients, yet this pattern has been found by many research teams using a variety of measures.

The clearest distinctions can be found through the use of projective testing, such as the Rorschach. DD patients demonstrate a greater capacity than psychotic patients to be self-reflective, to modulate affect, to think logically, and to see others as potentially collaborative, despite traumatic flooding. Both groups misperceive others and manifest some perceptual inaccuracies. DD patients demonstrate a greater level of self-reflection combined with a desire to actively seek change, personal assets which are not as prominent in PD. These differences in personality attributes may contribute to many DD individuals being able to more easily develop a working alliance and benefit from insight-oriented therapy than psychotic patients. But there is a clear need for more research to evaluate the effects of trauma on psychotic and dissociative symptomatology and to directly compare these patients on a variety of cognitive and personality tests.

Notes

1 On the MCMI, the disclosure scale (X) measures the willingness of the person to endorse items, the debasement scale (Z) measures the tendency to malinger or overreport (similar to the F scale on the MMPI-2), and the desirability scale (Y) measures defensiveness or denial of symptoms.
2 The MMPI Goldberg index is an arithmetical combination of five scales: the lie scale (L), the paranoia scale (Pa), the schizophrenia scale (Sc), the hysteria scale (Hy), and the psychasthenia scale (Pt).
3 As most DD patients are women, we have chosen to use 'she' rather than 'he' throughout the chapter.
4 Measured by the number of 'blends', which are responses involving multiple aspects of a perception, such as movement as well as colour.
5 Measured by Lambda, a ratio indicating a tendency to become overly responsive in even simplistic situations.

6 Perceptions suggestive of self-reflection, or if very high, self-inspection that borders on 'soul searching'.
7 V responses connote painful self-inspection.
8 Measured by the Traumatic Content Index, TCI: the combination of percepts involving blood, sexual, anatomical, aggressive and morbid content (Bl + Sx + An+AG + MOR/R).
9 FC > CF + C + 1; that is, when emotions are modulated by the ability to think concurrently, compared to when emotions take precedence over thinking.
10 Low Afr, a ratio indicating the tendency of a person to avoid experiencing emotion.
11 COP, indicated by a greater number of responses depicting people cooperating.
12 Sum H, measured by a higher number of responses with human content.
13 M-, the tendency to distort and misunderstand interactions with others.
14 X-, the tendency to distort perception.
15 The Schizophrenia Index is a list of six criteria that may indicate schizophrenia. When four or more criteria are fulfilled the index is positive and schizophrenia or PD should be a primary hypothesis. This index has more recently been replaced by the Perceptual-Thinking Index (PTI).

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23

The Role of Double Binds, Reality Testing, and Chronic Relational Trauma in the Genesis and Treatment of Borderline Personality Disorder

Ruth A. Blizard

The essence of Borderline Personality Disorder (BPD) has been something of a conundrum. It has been variously conceptualized as (i) a disorder on the border with psychosis (Stern, 1938), (ii) a level of personality organization more pathological than neurosis (Kernberg, 1975), (iii) a pattern of unstable and intense relationships (Millon, 1981) or (iv) a complex traumatic stress disorder (Chu, 2011; Courtois, 2012; Herman, 1992). The DSM-5 diagnostic criteria (APA, 2013) emphasize the instability of relationships, self-image, and affect; criterion 9 notes that, under extreme stress, 'paranoid ideation or severe dissociative symptoms' may occur, but are described as transient, lasting minutes to hours.

These official formulations of BPD fail to recognize the prevalence of childhood trauma and the pervasiveness of dissociative processes in persons with BPD. Trauma-based dissociative processes may underlie most of the symptoms described in the diagnostic criteria for BPD, including the apparently psychotic symptoms. More importantly, dissociation based in the double binds inherent in chronic relational trauma may account for the essential characteristic of BPD - the instability of identity, affect, behaviour, and relationships. In BPD, acute, episodic impairment in reality testing is based on dissociative symptoms such as illusions, disorientation, and flashbacks. A more pervasive and essential form of impairment of reality testing seen in BPD is based on polarized, severely distorted perceptions of self and others. These distortions may be patterned on the quality of attachment relationships with dysfunctional caregivers in childhood.

The term *borderline* was originally used to describe patients who appeared to be on the border between neurosis and psychosis (Stern, 1938) or *borderline schizophrenic*. This characterization was abandoned when research showed that persons with BPD rarely developed schizophrenia (Stone, 1992). However, the propensity to have brief, acute psychotic episodes is still recognized. This chapter addresses the relationship of BPD to psychosis of emotional or functional origin. Psychosis is here defined as such extensive impairment in a person's ability to interpret reality, respond emotionally, and behave appropriately that it interferes grossly with the capacity to meet the ordinary demands of life (Stone, 1988).

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
© 2019 John Wiley & Sons Ltd. Published 2019 by John Wiley & Sons Ltd.

The confusion that has marked the relationship between BPD and psychosis is due in part to the lack of diagnostic specificity for both BPD (Howell & Blizard, 2009; Şar & Öztürk, 2009) and schizophrenia (Read, 2004), and to the commonality both diagnoses have with dissociative disorders. The dissociative disorders have significant conceptual overlap with schizophrenia (Kluft, 1987; Ross et al., 1990) and, in many cases, delusions and hallucinations have post-traumatic content (Reiff, Castille, Muenzenmaier, & Link, 2012). In BPD, there is considerable co-occurrence with dissociative disorders (Dell, 1998; Korzekwa, Dell, Links, Thabane, & Fougere, 2009; Putnam, 1997; Şar, Akyuz, & Dogan, 2007; Şar, Akyüz, Kugu, Öztürk, & Ertem-Vehid, 2006; Şar et al., 2003).

The dissociative nature of BPD derives in part from a history of overt trauma, childhood abuse, and neglect (Golier et al., 2003; Gunderson & Sabo, 1993; Herman, 1992; McLean & Gallop, 2003; Silk, Nigg, Westen, & Lohr, 1997; Terr, 1994; Zanarini, 1997). As predicted in betrayal trauma theory (Freyd, 1996), the closer the relationship to the perpetrator, the greater the dissociation of memory for trauma (Freyd, DePrince, & Zurbriggen, 2001), as well as presence of borderline traits of idealizing and devaluing (Kaehler & Freyd, 2009).

Transient, psychotic symptoms may be generated by the triggering of dissociated memories, emotions, and behaviours, leading to the disorientation, perceptual distortions, and illusions common to flashbacks (Ellenson, 1986; Howell & Blizard, 2009; Terr, 1990). In BPD, these may temporarily impair reality testing and the ability to cope with present-day events. Even in severe hallucinations and delusions observed in schizophrenia, the content based in childhood abuse suggests these are intrusions of traumatic memories (Reiff et al., 2012). Thus, the tendency of dissociative symptoms to interfere with reality testing falls along a continuum, from occasional, brief episodes with full recovery in BPD to episodes whose frequency and severity preclude objective interpretation of reality in psychosis.

Likewise, the general ability to accurately perceive and interpret the characteristics of self and others can range along a spectrum from normal biases that can be corrected by new information, through more stubborn, borderline tendencies to idealize or devalue, to fixed delusions of grandeur or persecution.

Borderline personality may be best understood as a chronic relational trauma disorder, ensuing from contradictory, double-binding, caregiving relationships (Blizard, 2003; Howell & Blizard, 2009). The essential characteristic of BPD – instability of identity, affect, behaviour, and relationships – is more characteristic of dissociative spectrum disorders than of personality disorders. The alternation between idealizing and devaluing perceptions of self and others may best be explained by shifts between dissociated self-states with contradictory patterns of attachment (Blizard, 2001, 2003; Howell, 2002; Howell & Blizard, 2009). Moreover, polarized perceptions of self and others may underlie impalpable, generalized, delusional beliefs about the behaviour and intentions of others that pervade overall personality functioning.

Attachment relationships with caregivers who are dissociative, psychotic, or sociopathic involve thousands upon thousands of frightening, double-binding interactions that may impair the development of reality testing in a more pervasive and insidious manner than discrete traumatic events. Such contradictory relationships lead to disorganized attachment in infants, a condition that predicts dissociation from childhood into young adulthood (Carlson, 1998; Lyons-Ruth, Bronfman, & Atwood, 1999; see also Chapters 7 and 8 of this book, for links between disorganized attachment, double binds, and schizophrenia). The child may need to form dissociated, i.e. split, mental

representations of the good and bad aspects of the self in relationship to the caregiver (Blizard, 1997a, 2001, 2003; Liotti, 1992, 1999). These contradictory attachment patterns cannot be integrated into whole self and object representations, impairing the interpretation of people's appearance, intentions, and behaviour. During stress-induced, acute dissociative episodes, these distortions may be intensified and interact with traumatic memories to cause loss of contact with reality.

A parent's distorted or fragmented model of reality may actively discourage the use of important modes of reality testing needed to construct an integrated view of the world. Children need repeated interactions with adults who can articulate and empathize with the child's experiences as well as differentiate them from their own. Otherwise, these experiences remain as disconnected, implicit knowledge, and cannot be cognitively and emotionally integrated (Lyons-Ruth, 1999, 2001). When caregivers do not perform this reflective function, children are unable to be aware of their own experiences and begin to dissociate their sense of self (Schwartz, 2000). When the parental relationship is pervasively abusive and lacking in empathy for the child's perceptions, the child may develop a narcissistically closed system of self-nurturance (Howell, 2005). Afraid to look outside the self for care and protection, the child turns to an internalized representation of a caregiver. This prevents the child from engaging in consensual reality testing and lays the groundwork for the elaboration of distorted, idiosyncratic perceptions into full-blown delusions.

The Effects of Relational Trauma on Reality Testing

Reality testing is defined as the ability to evaluate the external world objectively and to differentiate adequately between it and the internal world (Stone, 1988). People use a variety of modalities to engage in this complicated task. From a developmental standpoint, the first modality is sensory cross validation: 'If I see it, can I touch, hear, smell, or taste it?' Next comes consensual validation: 'Did you see (hear, feel) what I saw?' Cognitive validation can take place internally, although it usually needs to be reinforced consensually: 'Did this event make sense, fit within my, your, or society's understanding of what is possible?' Distinguishing internal from external stimuli and being able to separate one's own feelings and perspective from others' requires the use of the first three forms of reality testing. Beyond simple, sensory cross validation, the capacity for reality testing depends on interaction with others. When the child's primary caregivers have circumscribed methods of reality testing or pervasively distorted perceptions of others, the child's basis for interpreting people will be similarly skewed.

Relational trauma may interfere with reality testing by causing fragmentation of perceptions of others or dissociation of awareness of the self. Traumatic experiences may be too bizarre to fit existing cognitive schemas. Without empathic validation and the opportunity to create a narrative description of that experience, it may be excluded from awareness. Familial denial of experience, such as, 'That doesn't hurt', 'Your father would never do a thing like that', or 'That didn't happen, you just imagined it', may cause a child to doubt her own experience and accept the consensual version of reality.

Distorted, polarized perceptions of self and others exclude characteristics that do not fit the idealized or devalued conceptions of them. Defensive needs to maintain distorted views of self lead to heightened disowning, dissociation, and projection of personal qualities that don't correspond to these views. This process takes place when there is a need to dissociatively idealize or devalue an attachment figure (Blizard, 2001, 2003;

Howell, 2002). Extreme forms of this may result in delusions of grandeur and persecution, with idealization of self and projection of shame, sadistic impulses, and fear of betrayal onto others, as is seen in narcissistic or perpetrator self-states. When helpless, victim states predominate, attachment to an abuser fuels the need to idealize that person. This may lead to displacement of fears onto others in the environment and an inability to realistically assess who is dangerous (Blizard, 2001; Howell, 1997, 2005). Excessive fearfulness, whether displaced from the perpetrator onto others or projected onto victims, may well be due to experiences of abuse, betrayal, or persecution by family or society, especially when there has been lack of familial or cultural validation of the actual source of threats or maltreatment.

Clinical Vignette

[Note: All cases described are composites with identifying details changed.]

Tammy's story illustrates the development of paranoid delusions subsequent to repeated threats and abuse in the context of familial and societal invalidation. Ordinarily, she functioned admirably as a mother and nurse's aide, but severe stress could drive her to psychotic thinking. The oldest of seven in a rural mining family, she was frequently blamed for her brother's misdeeds. The family colluded in keeping secrets – lying about her brother's criminal behaviour, raising children born out of wedlock as the mother's 'siblings'. As an adult, Tammy witnessed the massacre of a neighbour family. She was stalked and threatened by a boyfriend. Her family never acknowledged how terrifying either of these experiences was. Her husband blamed her for his drunken assaults on her. Her own parents refused to hear about her marital problems and her in-laws accepted domestic violence as normal.

Tammy developed an intense fear of being alone. She would abruptly shift from anger at her family to self-accusation. Whenever she was under real-life stress, she became frightened, hyper-aroused, and vigilant. Unable to slow her thoughts enough to sort her perceptions clearly, any fear-laden cues were given excessive weight. She'd imagine terrorists were hiding in the bushes or that she would be fired for a co-worker's misconduct. Once, when her fears overtook her ability to perceive reality, she was hospitalized, placed in restraints, and threatened by an unethical psychiatrist. This only confirmed her fears that her phones were bugged and that the police were going to put her in jail for all the bad things she had ever done. Her own perceptions were constantly challenged by the perspective of her abusers and invalidated by family, authority figures, and society. Introjects of her mother and then her husband took the form of a harsh superego and she justified all her suffering as punishment that she deserved. Her need to maintain her attachment to her mother and husband, despite their abuse, fuelled her denigration of herself and her own perceptions of people. While her fears clearly took on the proportions of delusions of persecution, their origins in terrifying incidents and traumatic relationships were clear.

Caregiver Pathology, Double Binds, Disorganized Attachment, and Dissociated Self-states

When children are attached to dissociative, sociopathic, or psychotic caregivers, they are repeatedly placed in double binds (Blizard, 2003; Spiegel, 1986; see Chapter 8 of this book for a discussion of the *double bind* theory). Despite their caregivers' empathic

failures, eccentricity, bewildering behaviour, or outright abusiveness, children still have to depend on them for survival. When a young child seeking comfort encounters fear, anger, or contradictory verbal and behavioural signals from the caregiver, the child is placed in a double bind, unable to approach the parent, survive alone, or turn to others. This may cause a breakdown in cognitive and behavioural schema, leading to rapidly alternating approach and avoidance behaviour and disorganized attachment (Hesse & Main, 1999). Unable to cope with the contradictory demands of the situation, the child cannot develop integrated strategies for negotiating relationships and so alternates between opposing relational schemas. In adults this takes the form of alternating between a submissive, self-deprecating, guilt-ridden, victim self-state and a dismissive, blaming, judgmental, perpetrator self-state.

Clinical Vignettes

The alternation of victim and perpetrator states leads to emotional lability and contradiction between perceptions of self and others as good or bad. This was demonstrated by Paula, who switched between the role of the child desperately trying to placate the abuser and identification with the aggressor. Rejected by her mother, she had a pathologically enmeshed relationship with her father, clearly the primary attachment. He'd become enraged at her behaviour and beat her brutally. Later, he'd feel guilty, dissolve into tears, tell her he forgave her for making him angry, and then comfort himself by holding her. This double bind left Paula alternately feeling enraged, rejected, and deeply loved. She described how awful it was that he treated her this way, then, in the next breath, said that she loved him and he loved her. She would go from rage to tears within seconds. In therapy, she could feel invalidated by a minor misunderstanding. As her anger surged out of control, she'd berate the therapist for failing to manage her rage. Then she'd feel guilty about getting so angry and condemn herself for being so damaged. Finally, she calmed down and could take in empathic statements, perhaps mirroring the momentary closeness she felt with her father. But in the next session, she'd be depressed over her Jekyll and Hyde range of emotions. Then she'd start blaming the therapist for failing to teach her how to interact better. This emotional lability and contradiction of her own perceptions could be considered borderline psychotic, but it clearly mirrored the reality, albeit dissociated, of her relationship with her father.

Roy had a similar relationship with his mother. She constantly rebuked him for his inadequacies, and yet she insisted she couldn't live without him. The double bind was all the more powerful because she never held or comforted him. He was forbidden to express emotional needs, and he was beaten for crying, even when he'd broken his nose playing soccer. The combination of punishment for being vulnerable and rejection for being worthless made him desperately needy and dependent on his mother. Her fierce insistence that her life depended on him made the attachment more intense. Her behavioural message was that no other kind of love was available, and the accompanying verbal message was that no one else could ever love him. The only way Roy could function in the face of this dilemma was to develop two dissociated self-states: one, strong and stoic, needing no-one, and able to defend against punishment with ingenious arguments; the second, deeply devoted to his mother, maintaining the attachment even at the cost of actively cooperating in her brutal punishments.

Soon after Roy joined the military to get away from home, his mother died of a drug overdose. He always felt deeply that her death was his fault, despite being able to reason

that taking the pills was her own responsibility. He used the GI bill to go to law school, and became respected as a public defender, working tirelessly to prevent unfair sentencing of the disadvantaged. In his personal life, he married a possessive woman who criticized him relentlessly, mirroring his attachment to his mother. When his wife left him, he fell into an immobilizing depression, believing that the divorce was his fault and that no other woman would ever want him. He heard his mother's voice telling him to kill himself. Without an understanding of dissociative processes, such command hallucinations are typically viewed as indicative of schizophrenia. However, given Roy's history, hearing such voices could be viewed as a stress-induced, acute dissociative episode in which an introject of his mother was simultaneously imploring him to join her in the after-life and punishing him for leaving her. In a last-ditch effort to replace his marital relationship, this dissociated maternal introject was re-enacting the double-bind attachment he had to his mother.

The child's ability to interpret people's motivation and behaviour realistically can be seriously impaired by growing up with double-bind attachment relationships. To cope with caregivers' contradictory demands, the child is forced to develop dissociated self-states in order to keep relational strategies for maintaining attachment separate from conflicting tactics to protect the self from frightening caregivers. In order to maintain perceptions of others that are consistent with a particular relational strategy, one aspect of the double-binding message may be routinely denied, discounted, or dissociated. This can lead to a failure to perceive entire aspects of relational interchanges, such as body language, facial expression, or tone of voice, as well as the inability to interpret their significance. This tendency to see only half the picture, to perceive only the signs indicating that a person is either dangerous or entirely trustworthy, has traditionally been called 'splitting'. The alternation between idealizing and devaluing relationships in BPD is fundamentally the same as the switching between idealizing child states and angry perpetrator states in dissociative identity disorder (DID).

Treatment of alternating, contradictory perceptions of reality depends on the therapist's understanding of the respective needs of dissociated self-states to maintain these distorted views. Dissociated self-states with contradictory attachment models develop early in life, are based on thousands of interactions with caregivers, and regulate the child's management of relationships necessary for survival. Thus, they are very resistant to change. Beyond the processing of traumatic events, there must be the opportunity to process the nature of attachment relationships within a continuing therapeutic relationship. The therapist must relate empathically with both self-states, and, over time, act as a relational bridge, bringing the attachment models and world views of these states together to integrate them into a whole (Blizard, 1997b, 2001, 2003; Howell & Blizard, 2009). It is only possible to overcome resistance by working with what was, in childhood, the adaptive need to maintain separate perceptions of self and other in order to preserve attachment and protect the self.

When a parent is unable to be empathic with a child, the parent can neither acknowledge the child's perspective nor validate the child's experience. Even when an impaired parent is able to be caring some of the time, the erratic nature of this relatedness forces the child to be closely attuned to the parent's mental state and internal world, precluding awareness of the child's own experience and needs. In order to maintain attachment to incomprehensible, frightening, or abusive parents, the child becomes exquisitely attuned to the caregivers' thoughts, feelings, and perceptions, and incorporates their

behaviour and relational patterns (Blizard, 1997a, 2001; Howell, 2002). Such parents may project their own thoughts, feelings, and intentions onto the child, interfering with the child's ability to differentiate his own experience from that of the parent. This may lead to difficulty distinguishing internal from external and imagination from reality.

Treating the Effects of Dissociative, Psychotic, or Sociopathic Caregivers on Reality Testing

When caregivers are contradictory or unpredictable, the connections between cause and effect will seem tenuous to the child. There may be little opportunity to articulate incomprehensible events, engage in consensual validation, or learn some form of hypothesis testing. Whether the child is attached to dissociative, sociopathic, or psychotic caregivers, there will be exposure to fragmented or highly distorted views of others and poor modelling of consensual reality testing. Further, when parents suffer from dissociative, sociopathic, or psychotic pathology, their external presentation is often not representative of their internal state. Caregivers with DID have dissociated self-states that appear without warning, may be diametrically opposed to what the previous state presented to the child, and present the multiple realities of their multiple self-states. Psychotic parents are responding to internal stimuli that are not available to the child and present a reality that is not experienced by others. Sociopathic parents deliberately deceive the child, and are often very practiced at presenting a false version of reality. In all of these cases, the child's experience is that people are not who they appear to be, that people live in more than one reality, and that no one's perception of reality is necessarily to be trusted.

Clinical Vignettes

Theresa exhibited the classic borderline alternation between idealizing and devaluing in all of her relationships to an extreme degree. It was almost as if each person with whom she was in relationship were actually two separate persons. For example, Theresa described her mother as if she were two different people, suggesting that her mother was exhibiting DID. Theresa associated separate and distinct realities with these 'different mothers'. The mother who read Shakespeare to her inhabited a world of proper comportment and trips to the library, while the one who sexually abused her picked up men in seamy bars and was addicted to Valium. It was extremely difficult for Theresa to integrate her concept of these two sides of her mother. As a consequence, Theresa anticipated that all people could suddenly transmute into radically different personalities. In her work as an assistant librarian, she lived in one reality, while she avoided relationships and social activities in fear and contempt of people in the other reality. While Theresa manifested DID with high co-consciousness, her frequent alternation between a helpless, submissive, idealizing child state and a self-sufficient, dismissing, aggressive state, with accompanying fear of abandonment, affect dysregulation, and destructive behaviour, warranted a concurrent diagnosis of BPD.

An important element of Theresa's treatment was validating that her mother did do some good things, while helping her to keep in mind her own reports of her mother's cruelty. Eventually, Theresa was able to see how her mother could make several

personality switches during a single phone call. She became aware of her own alternation from idealizing child to self-sufficient adult personalities in concert with her mother's shifts. This allowed her to adapt to her mother's changing demands and avoid provoking her anger. Group therapy with other borderline and dissociative patients was extremely helpful. They could validate her experiences with similar stories of their own parents' abrupt fluctuations. They also helped Theresa maintain awareness of the contradictory messages of her mother's alternating states, and avoid denial of the unpleasant ones.

A *psychotic* parent responds to his own delusions or hallucinations. Perceptions of people in the external world are likely to be coloured by internal stimuli. The child may incorporate these distorted views. The discovery that others, at best, are confounded by these strange perceptions and, at worst, ridicule them, may make the child afraid to test her perceptions against those of others. As the child feels increasingly alienated, she may retreat further into a closed system of thinking and be able to trust only those who resonate with it.

Molly was an emotional caretaker for her psychotic mother, an archaeologist who was reclusive and suspicious of everyone. To manage her mother's mental state, she had to be exquisitely attuned to her mother's often bizarre view of people and society. Her mother could provide little reflection or emotional validation of Molly's experience, and even less differentiation of their separate perspectives. Molly lost touch with her own feelings and perceptions and learned to relate to others in a dichotomous way. Either she became totally absorbed in their experiences, identifying with them without questioning, or she rejected them as suspect and part of the larger conspiracy her mother saw everywhere. This mode of relating became an extreme form of idealizing and devaluing. Molly was unable to engage in consensual reality testing. She fell briefly under the thrall of a charismatic religious guru, and later believed that many of the people she knew belonged to a secret society connected with an alternate universe. Otherwise, she excelled as a sociology professor. Early in treatment it was important to avoid challenging Molly's distorted perceptions of her relationship with her mother. As the therapeutic alliance developed, it was possible, gradually, for the therapist to present progressive differences between Molly's point of view and her own. Molly became better able to tolerate the therapist acknowledging her own shortcomings. This allowed Molly to experience reflection of her own emotions, differentiation of personal boundaries, the ability to maintain a relationship despite disagreements, and eventually a means of engaging in consensual reality testing.

A *sociopathic* parent distrusts others implicitly. He categorically rejects their perspectives and so cannot engage in consensual reality testing. He treats the child as an object, and thus deprives the child of any validation that her own perceptions, emotions, and thoughts exist. He lies and deceives, and so cannot be trusted by the child as a source of valid information. Ironically, the child has little option but to incorporate the parent's skewed perspective and assume that everyone is deceptive and manipulative. The child may need to develop a closed system of self-care in order to survive, especially if the parent is sadistically abusive, as in the case of Jeremiah (Blizard, 2003).

Jeremiah was a brilliant research physicist who grew up in a family devoid of affection and with only minimal interaction, 'Like strangers in a rooming house'. His father could

be considered a psychopathic sadist. While he enforced extreme standards of academic excellence, far more frightening was the planned sexual torture he organized. Jeremiah perceived his mother as putting on a charade of excessive maternal concern while being largely absent and absorbed with her own needs. He may have experienced some comfort in serving as her narcissistic object, perhaps soothing her by listening attentively. However, her failure to protect him from his father made Jeremiah suspect that she gained some sadistic pleasure from appearing to watch helplessly.

The horror of his father's deliberate sadistic abuse, his mother's failure to protect him, and the absence of any other benign attachment made Jeremiah so afraid of everyone that he retreated into a fantasy life. He allowed a shell of himself to behave with perfect comportment and excel in his research work. He had two dissociated self-states that operated mainly in fantasy. One was helpless, preoccupied with attachment, and despairing over his inability to have any relationship. He soothed this despair by fantasizing a perfect woman who was totally devoted to him, understanding his every feeling. To protect him from his fears of abandonment and abuse, a perpetrator state disowned his neediness by resorting to sadistic fantasies of torturing her slowly and horribly for rejecting him. His identification with the aggressor was also played out in contrasting fantasies approaching delusions of grandeur, on one hand expecting himself to win the Nobel Prize, and on the other, plotting the perfect mass murder. Being around men induced intrusive images of sexual abuse, leading to fears that all men wanted to torment him sexually. From his sense that his mother covertly enjoyed his suffering, he assumed that all women, including the therapist, gained some sadistic satisfaction from hearing about his misery. Without knowledge of their traumatic antecedents, these exaggerated fears could have been interpreted as delusions of persecution.

Therapy with Jeremiah required two to three sessions a week for many years to assuage his need for attachment and keep him from the 'abyss' of solitude. He often described himself and his experience of the world with bizarre, psychotic images, such as a disembodied head in a vacuum jar on a barren planet. For years he managed his personal safety in sessions by talking nonstop, objecting to any therapeutic comments as intrusive. Gradually, he became able to tolerate reflections of his dilemma: feeling safe in intolerable isolation vs. fearing abuse in a relationship. After many years of treatment, he was able to allow an angry dissociated self-state to emerge partially. Because both the memories of his father's sadistic abuse and his own rageful impulses were so terrifying, he could not allow this part of himself to communicate directly. He found he could express his rage, horror, and despair without explicitly owning them by graphically describing violent movies that portrayed these feelings. Only in this indirect format could he express his terror of humiliating abuse and his fantasies of sadistic revenge. The therapist built a relational bridge between his dissociated self-states by listening attentively, at first reflecting the needs for attachment, revenge, and understanding portrayed by the actors, and, much later, relating these to Jeremiah's own experiences. After many years of intensive treatment, both his grandiose and his sadistic fantasies receded, and he no longer used bizarre images to describe himself. In a move toward whole object relations, his perceptions of others were transformed from a dichotomy of absolute perfection vs. annihilating contempt to being able to accept that someone with an annoying trait could be basically a good person.

Conclusion: Borderline Psychotic Traits Stemming from Relational Trauma Require Relational Treatment

All of the cases in this chapter portray psychotic symptoms in persons who otherwise had sufficient reality-testing abilities to allow them to function in society and sometimes excel professionally. They provide a picture of how psychotic features may form an integral part of borderline personality along a broad spectrum of severity, from episodic disorientation and disjunctions in sense of self to acute psychotic episodes, fully dissociated self-states, and persisting delusions of persecution and grandeur. Some of these psychotic symptoms could be traced to discrete traumatic events, including chronic child abuse. However, the psychotic quality of their relational worlds was based in traumatic attachment relationships that incorporated emotional invalidation and bizarre or fragmented reality testing. This produced patterns of pervasively distorted perceptions of self in relation to others that could be strangely fractionated or frankly delusional. Thus, our understanding of BPD has come full circle: a disorder occurring on a continuum, with the extreme bordering on psychosis.

The implications for treatment derive from an understanding of the double binds inherent in traumatic attachment relationships. When children depend for survival on caregivers who are frightening, contradictory, or abusive, they cannot manage the attachment and still perceive the parent as a whole person. Dissociated attachment models, containing segregated representations of self in relation to others, become the template for perceiving all persons in distorted and fragmented ways. Whether these distortions and alternations between dissociated self-states result in emotional lability, self-defeating behaviour, or psychotic delusions, treatment depends on understanding their origins in the double binds of chronically traumatic relationships. Only by relating to both sides of the dilemma and creating a bridge between them can the therapist create a template for perceiving the self and others as whole persons. This forms the basis for comprehensive, functional reality testing.

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24

Accepting and Working with Voices

The Maastricht Approach

Dirk Corstens, Sandra Escher, Marius Romme, and Eleanor Longden

Over the past three decades in Maastricht, the Netherlands, psychiatrist Marius Romme and researcher Sandra Escher have developed a new approach to hearing voices[1] which emphasizes accepting and making sense of the experience. This framework, sometimes referred to as 'the Maastricht approach', has grown progressively more influential in Europe, North America, Australasia, and elsewhere, and has led to voice hearers organizing themselves into networks in order to empower themselves, challenge stigma, and find new and constructive ways of working towards recovery (Corstens, Longden, McCarthy-Jones, Waddingham, & Thomas, 2014; Longden, Corstens, & Dillon, 2013; Woods, 2013).

This approach contends that people hearing voices (hereafter referred to as 'VHs' for 'voice hearers') can learn to cope with the experience and benefit from psychosocial interventions. It is based on three central tenets: (i) that the phenomena of hearing voices is more prevalent in the general population than was previously believed, and as such should not be considered a symptom of illness in and of itself; (ii) that the phenomena of hearing voices can be understood as a personal reaction to life stresses, whose meaning and psychological purpose can be deciphered, and (iii) that the phenomena of hearing voices is more accurately considered as a dissociative experience rather than as a psychotic symptom. In addition to emphasizing the importance of understanding the subjective meaning of voices, a specific treatment model for working directly with a person's voices – emphasizing their dissociative nature – has been developed by adapting the Voice Dialogue method (Stone & Stone, 1989).

The History of the Maastricht Approach and the Hearing Voices Movement

Beginning with one patient who insisted that her voice-hearing experiences should be taken seriously, Romme and Escher worked in close collaboration with VHs to conduct research projects and organize meetings for VHs and professionals (see James, 2001). In this regard, early work found that bringing together patient and non-patient VHs highlighted the relative lack of difference between the experiences of these two groups at the point at which voices first emerged. In contrast, a striking difference was that the

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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non-patients were more likely to have a subjectively meaningful framework for their voices and to be able to cope with them successfully. Sharing the stories of non-patient VHs, as well as patients who had recovered, generated considerable hope for distressed VHs; their narratives were widely shared in conferences, media work, and network meetings within the Netherlands.

Effectively, accepting and making sense of voices became a new paradigm, constructively creating new treatment approaches and ways of recovery.

Starting in the UK but ultimately moving internationally, this has led to the development of collectives of VHs (known as 'Hearing Voices Networks') who created and elaborated ways of supporting one another outside of statutory mental health services. These activities, in turn, led to and became embedded in what is known today as the International Hearing Voices Movement (see Longden et al., 2013). Today, there are Hearing Voices Networks in 32 countries across the world, whose activities are supported and coordinated via Intervoice (www.intervoiceonline.org), the organizational body of the International Hearing Voices Movement. In addition to this administrative role, an important function of Intervoice is to disseminate messages of hope, promote training and research, and offer practical support for distressed individuals trying to make sense of their experiences.

Relevant Research Findings

Since Romme and Escher's (1989, 1993, 2000) initial work, substantial empirical support has been provided for the Maastricht approach's key propositions. For example, the recognition that voice hearing specifically, and psychosis generally, is robustly associated with trauma and adversity has moved from 'heresy to certainty' (Read, 2013, p. 249; see also Longden, Madill, & Waterman, 2012; Read & Bentall, 2012; Read, Fosse, Moskowitz, & Perry, 2014; Read, Van Os, Morrison, & Ross, 2005; Varese et al., 2012). Correspondingly, the potential for non-pharmacological interventions has been increasingly acknowledged (e.g. British Psychological Society: Division of Clinical Psychology [BPS], 2014; Morrison et al., 2014; Read & Ross, 2003). Epidemiological data likewise confirm that hearing voices is by no means the sole province of the mentally ill, but is rather part of the spectrum of human difference and diversity (see Beavan, Read, & Cartwright, 2011; McCarthy-Jones, 2012). In turn, the phenomenological differences between voice characteristics in non-patients, patients with non-psychotic diagnoses, and patients with a formal diagnosis of schizophrenia have been shown to be surprisingly small (see Johns et al., 2014; Longden et al., 2012; McCarthy-Jones, 2012; Moskowitz & Corstens, 2007). In general, however, non-patient VHs feel less powerless and are less afraid of their voices. Relatedly, an important factor for determining clinical need appears to be a person's *reaction* to their voices, and the ways they cope (or otherwise) with the underlying problems and conflicts that are implicated in voice onset and maintenance (e.g. Andrew, Gray, & Snowden, 2008; Romme, Escher, Dillon, Corstens, & Morris, 2009; Romme, Honig, Noorthoorn, & Escher, 1992; see also Chapter 13 in this book). For example, in their own research, Romme and Escher observed that for 70% of voice-hearing patients and 50% of non-patients, voice onset was clearly connected to threatening or traumatizing daily life experiences (Honig et al., 1998; Romme & Escher, 1989; see also Corstens & Longden, 2013). Similarly, for a group of 80 voice-hearing children, 85% linked voice onset to trauma or stressful events, such as sexual and

physical abuse, chronic emotional neglect, bullying, loss of a loved one (and being denied appropriate forms of support during bereavement), and parental divorce (Escher et al., 2004). Many, however, were able to cope with their voices without needing professional treatment. Correspondingly, the notion that voice hearing can be understood as a dissociative phenomenon (Moskowitz & Corstens, 2007; Chapter 13 of this book) is increasingly well evidenced, with a recent meta-analysis demonstrating a large, significant effect (r = 0.52) across 19 studies assessing patients with psychosis and non-psychotic diagnoses, and non-patient VHs (Pilton, Varese, Berry, & Bucci, 2015).

Assessment: The Maastricht Hearing Voices Interview

Traditional psychiatry tends to view voices as pathological phenomenon, with little support typically offered to VHs who seek help beyond medication. The alternative approach of the Maastricht model is based on helping people make sense of their voices and learning to cope and relate with them. A clinical strategy particularly associated with this endeavour is the Maastricht Hearing Voices Interview (MHVI; Romme & Escher, 2000), a specialized assessment instrument for systematically exploring the links between voice content/characteristics and the psychosocial circumstances of the VH, both during and prior to voice emergence. By emphasizing environmental rather than biogenetic influences in the origin and onset of distressing voices, it is consistent with the original diathesis/stress model, proposed by Zubin and Spring (1977), which did not insist on a genetic or biologically caused vulnerability. This approach differentiates between acute stressors (circumstances that directly precipitate the start of voice hearing) and developmental events that create vulnerability for emotional crisis (psychological predisposition). As a tool to structure information gathering, the MHVI encourages the VH to explore their own experiences and establish some emotional distance from the voices, which in turn can highlight important information for clinical intervention. A brief summary of the MHVI structure is presented below.

1) The Nature of the Experience:
   Establishing whether the person actually hears voices, or if the experience is better characterized as intrusive thoughts. Voice location is also explored (if they are heard inside the head or externally through the ears), as well as the presence of other unusual sensory experiences and how these may relate to the voices.
2) Characteristics of the Voices:
   Factors like name, age and gender (if known/applicable), frequency, duration, speaking tone, and ways in which the different voices may relate both to one another and to the VH.
3) Personal History of Voice Hearing:
   The VH's circumstances when each voice appeared for the first time, and how the voices may have developed since then in terms of content and influence.[2]
4) Triggers:
   Particular places, situations, and/or emotions that trigger the voices, and how each voice responds to these.
5) What do the Voices Say?
   The content of each voice, preferably in whole sentences or exact words.[3]
6) Explanations for the Origin of the Voice(s):
   The person's own perspectives on why they are hearing voices.

7) Impact of the Voices on Daily Life:
   The effect of voice hearing on the VH's personal goals. Strategies used by the voices (e.g. giving advice, commanding, 'blackmailing', threatening, punishment) are also examined, as well as the impact of these on the VH.
8) Balance of the Relationship:
   The ways in which the VH relates to and communicates with the voices.
9) Coping Strategies:
   Existing coping responses, broadly categorized into three themes: cognitive, behavioural, and physiological.
10) Childhood Experiences:
    Significant developmental events, particularly exposure to adversity, loss, and unmet emotional needs.
11) Treatment History:
    What support the VH has received, and how effective it has been.
12) Social Network:
    An inventory of the presence/absence of supportive social contact.

An experienced interviewer generally takes 90 minutes to conduct the MHVI, although it is also possible to use it in clinical practice in a more extensive form (e.g. over several sessions). Before beginning the process, it is important to allow time to develop rapport by showing a broader interest in the person and their problems, combined with positive examples of other VH's experiences of coping and recovery (e.g. Romme et al., 2009), in order to help motivate the person to talk about the voices.

When the interview is concluded, the interviewer writes a report summarizing the information in an accessible way. The VH is then asked to read the report and comment on it in order to discuss possible omissions or misunderstandings. Participating in this way can be a first step in reducing the types of emotional and cognitive avoidance that are so common among VH, and encouraging the VH to discuss new strategies for dealing with voices and emotions, as well as identifying practical and interpersonal issues that may be hindering recovery. We have often found that the interview process alone can have a therapeutic effect, because it helps VHs become more aware of the meaning of their voices, the relationship with their emotions and important psychosocial issues, and to increase motivation to try other coping strategies. However, we emphasize that the *systematic* use of the interview is necessary in order to structure the process and become aware of important aspects of the voice-hearing experience.

Formulation: Making the Construct/Breaking the Code

Hearing voices is typically the end result of a sequence: (i) *trauma* leads to (ii) *overwhelming emotions* which provoke (iii) *dissociation* or *repression*. It is at this point that (iv) *coping fails* and (v) *hearing voices* starts (for comparable sequences in the context of delusions, see Garfield, 2009). When this pattern is *deconstructed*, the individual's experiences can then be *reconstructed* as a sign of specific underlying problems and conflicts (i.e. when coping fails, the voices take over). In children we often find a shorter sequence, as voice hearing for them is often a direct response to traumatic experience as part of a dissociative reaction. Typically, the voice is 'protecting' the child. For example, during years of sexual abuse, a voice may offer emotional support. However, it is also not

uncommon that the voice resembles the characteristics of the abuser; thus the voice can be viewed as a 'warning signal' on the one hand, expressing the dangerous and threatening behaviour of another person and, on the other, serving to split off overwhelming feelings of terror and fear of annihilation.

Because hearing voices can initially feel deeply shocking and distressing, people easily become overwhelmed and ashamed. In Western culture, hearing voices is closely associated with mental instability. Because of this societal ideology, many VHs don't relate their voices to their life history. Making sense of voices thus acknowledges their connection with overwhelming experiences. It requires an open, empathic attitude combined with a systematic approach to observing and gathering significant information: in effect, to decipher the relationship between the voices and life events and break the defensive 'code' (i.e. what the voices say may not adequately represent their purpose), which in patient VHs often involves destructive communication patterns and an exaggerated, negative way of expressing individual emotional problems. This search for meaning leads to a dynamic psychosocial formulation that Romme and Escher (2000) have called 'the construct', which is effectively an understanding of the purpose of the voice negotiated between the interviewer and the VH. Two key questions are explored from the information in the report in order to formulate the construct:

- *Who or what do the voices represent?*
- *What problems do the voices represent?*

Who or What Do the Voices Represent?

Traumatic events often involve other individuals, as well as powerful emotions that the survivor finds difficult to cope with. How the voices relate to the VH often resembles the identity and the characteristics of significant individuals related to the trauma in either a literal or metaphorical way, and significant actors in an emotionally overwhelming event will often influence voice characteristics (see Leudar & Thomas, 2000, particularly their comments about William James's notion of the social self). For example, the voice might have the same name or characteristics (gender, age) as the perpetrator, and the way it speaks may resemble the person involved in the trauma. In some cases, the voice may partly be a direct re-experiencing of the original traumatic events (McCarthy-Jones & Longden, 2015). Alternatively, voice content may only thematically reflect the words said by the original aggressor(s). The voice relates to the life history and, while the VH may not be wholly aware of this, it is often something that they can easily recognize when the connection is worked out with them. Sometimes collaborative imagination is needed in order to discover the 'who' behind the voices: for example, the tone and content of a voice may not be congruent (e.g. a female voice repeating the words of a real-life male perpetrator). Nevertheless, voice hearing can often be understood as a reaction to social problems, sometimes as a mirror of overwhelming situations, on the basis of the vulnerability of the individual. The identity, content, and characteristics of the voices and their origin can thus often indicate who or what they represent.

In stating this, we also acknowledge the intricacies of the concept of representation. It is not our contention that voices 'are' (for example) the literal perpetrators; rather that they embody the VH's memories, feelings, and beliefs about negative events (and as such are only an indirect representation of other people). In turn, this includes aspects

of the VH that may have identified with individuals who have harmed them (e.g. a voice that says 'you're bad, you deserved it' can be seen as a part of the person which has internalized and believed this message). As such it is still possible to learn to relate to seemingly negative and abusive voices in an empathetic way. In this regard there are numerous examples within the Hearing Voices Movement of survivor testimony (including individuals diagnosed with psychosis/schizophrenia) wherein extremely aggressive voices have been reappraised by the VH as aspects of themselves which have been profoundly wounded, and thus in the greatest need of compassion and care (e.g. Coleman, 2011; Dillon, 2011; Longden, 2013; Romme et al., 2009).

What Problems Do the Voices Represent?

This question goes to the circumstances that lie at the root of the voice-hearing experience: generally problems, conflicts, and traumatic events that were so overwhelming they exceeded the individual's coping capacity. Resilience in the face of trauma exposure is strongly influenced by childhood experiences, in which we learn how to cope with life stressors, regulate and tolerate emotion, and adapt to internal and external conflicts. Many VHs have been emotionally inhibited in childhood by their caregivers or other significant adults (e.g. teachers). Consequently, they may have extremely low self-esteem; the more vulnerable a person is, the more difficult it becomes to learn to endure and negotiate stressful events. Thus, in addition to trauma and abuse, other root problems can include such adversities as severe workplace conflict, domestic tension, sexual identity confusion, loyalty conflict, etc.

The Construct in Clinical Practice

The Maastricht approach promotes the idea that voices make emotional sense in the context of the VH's life. However, it also acknowledges that not all individuals accept this perspective in regard to their own voices. One concept which we often use to demonstrate how negative emotional experiences can be related to protection is the concept of the 'Inner Critic' (Stone & Stone, 1989), in which the 'Inner Critic' becomes a 'negative voice' that helps the person adapt to her environment and the expectations of her caregivers (for further discussion of relating this framework to voice hearing, see the later section 'Talking With Voices').

It can often be useful for clinicians to preface the construct process by describing positive examples of the method (e.g. Romme et al., 2009), including drawing from their own practice to show how the process can be safe and accessible. Clinicians should also be open and authentic from the outset about their intentions – for example, by acknowledging that they believe strong connections often exist between voices and overwhelming experiences, and that they would like to explore this hypothesis with the VH.

Essentially, devising a construct requires an open, empathic working attitude combined with a systematic, collaborative approach to observing and gathering significant information. Consistent with best-practice guidelines for psychological formulation (e.g. BPS, 2011), the process should always honour the perspective and preferences of the VH, and not coerce them to accept the 'professional viewpoint' as the most accurate and useful. The opinions of the VH should never be attacked, but rather respectfully explored. For example, if someone tells us they are hearing the voice of evil spirits, we would not tell them they are wrong but rather try and understand what this belief means to them and what function it may be serving. Indeed, in this regard, developing a

construct is not an isolated activity led by the professional, but rather results from active collaboration with the VH. In our experience, it is possible to work therapeutically with unresolved emotional issues while not coercing a VH to accept a psychosocial perspective (for example, we have seen instances in which VHs have been supported to seek religious counselling for what they believed were demonic voices, while therapists simultaneously provided support around trauma experiences).

The utility of the construct method has been assessed by Corstens and Longden (2013), who report on its application with 100 VHs. Within this sample, the average length of voice hearing was 18 years, 80 were diagnosed with schizophrenia/psychosis, and adverse childhood experiences were reported by 89 individuals . The query *who or what do the voices represent* was formulated in 78 cases (most commonly disowned aspects of self or an abusive family member), with *what problems do the voices represent* being apparent in 94 of cases (most frequently low self-worth, anger, and shame/guilt). While the conclusions that can be drawn from this work are limited by its non-controlled observational design, it serves to add to the rapidly growing literature on the possibility of seeking meaningful links between psychosocial events and the content of so-called psychotic symptoms (BPS, 2011, 2014). As Fowler, Garety, and Kuipers (1998) describe it, '[s]uch links often provide indications of long-standing unresolved difficulties and associated negative self-evaluations … which may be closely intertwined with processes maintaining delusional beliefs and voices and may underpin aspects of the emotional reaction' (p. 127).

An Example: Maureen, Aged 30

The identity of the voices: The voices are all female: Ina (perceived age 7), Anna (age 19), and Johanna (age 30).

The content/characteristics of the voices: Ina persistently speaks about the abuse Maureen experienced as child and will cry or shout if Maureen does not listen to her. Anna accuses Maureen of being 'weak' and 'worthless', and of failing to defend herself against other people. She attacks Maureen and tells her to kill herself because she is 'such a wimp'. Johanna is a positive voice who is helpful and supportive. She often gives advice, such as not listening to the other voices and looking for coping strategies.

Triggers: Ina is triggered by visits to Maureen's parents, as well as by thoughts and emotions that relate to sexual experience. Triggers for Anna are when Maureen has to be assertive but feels unable to do so, when Maureen visits her family, or when she interacts with men. Johanna is most active when the other voices, especially Anna, are aggressive and Maureen feels afraid of them, or when Maureen fears that she will end up obeying Anna's destructive commands.

The history of the voices: Ina appeared when Maureen was seven years old, the age when she began to be sexually abused by an uncle. This abuse lasted for five years. Anna first came when Maureen was 19 years old, the point at which Maureen wanted her parents to help her to officially accuse the uncle and have him prosecuted. Though they initially agreed, her parents then changed their minds and withdrew their support, just before legal proceedings were scheduled to begin. It was then that the voice of Anna came. Johanna appeared when Maureen first began therapy.

Childhood history: In addition to the sexual abuse, Maureen was brought up in a very controlling, authoritarian manner. Her parents discouraged the expression of strong emotions such as anger, and consequently she did not learn how to be assertive or to advocate for her needs.

Who do the voices represent? Ina and Anna do not reflect real people, but embody Maureen's own beliefs, emotions, and memories related to the sexual abuse. Johanna represents the part of Maureen that is trying to help herself.

Ina is 7 years old, the same age as Maureen was when her uncle began abusing her. This voice shouts and cries, and embodies the overwhelming fear and despair that were repressed during the actual abuse. The traumatic events are almost 'frozen' in the voice and repeat themselves endlessly with little alteration (including the fact that the voice has never aged).

Anna is the same age as Maureen was when she was betrayed by her parents and denied an opportunity to seek justice. Maureen consequently experienced an overwhelming sense of guilt, shame, and rejection. The content of this voice reflects Maureen's emotional confusion, as well as internalized anger for not feeling able to 'stand up for herself'.

Johanna is the same age as when Maureen began therapy. This voice reflects the therapist who created a safe place for Maureen to express her experiences and needs, as well as the part of Maureen that is trying to cope and survive.

What problems do the voices represent? Maureen agreed that all the information gathered in the construct related to her difficulties in coming to terms with the feelings of guilt and shame related to the sexual abuse. Maureen's therapist subsequently focused on helping Maureen acquire more control over the voices by helping her schedule time for them during the day. The next issues discussed were learning to talk about the abuse, recognizing the related somatic complaints as signals of stress and anxiety, and dealing with Maureen's guilt and confusion about her own 'contribution' to the abuse and her belief that she had 'let it go on for so long'. The grooming techniques of the perpetrator were also explored. Later, Maureen's own choices regarding sexuality and sexual identity, and her life goals, were emphasized.

Recovery

Recovery is a personal process within a supportive environment – learning to express one's own personal story and be validated for who one is. For many VHs, self-help groups, supporting others, and learning to communicate about one's voices can be an important step. In turn, learning to accept the voices, finding positive ways to communicate with them, and viewing them as warning signals of emotional problems, can indicate therapeutic avenues for solving emotional and social difficulties (Romme et al., 2009). In our experience, this process often results in the person's relationship with their voices becoming more positive. VHs can learn to have pride in their experiences and to give their voices a personal and positive meaning. Other VHs learn to cope with them effectively and create a fulfilling life of which the voices become a part. They learn to no longer be dominated by their voices and to make their own choices.

Recovery, ultimately, is about dealing with life and its problems. Voices can challenge this process, but can also be an important part of understanding and integrating one's emotional conflicts. Within this process, support from family, friends, other VHs, and professionals is needed. For professionals, we believe it is our task to facilitate such an environment by individual, community, social, and political support.

Recovery Plan

One important function of the construct is its use in developing a recovery plan, which is focused around three main goals: (i) identifying the most troubling aspects of the voices and selecting and practicing appropriate coping strategies, (ii) improving the VH's ability to tolerate and process painful emotions, and (iii) dealing with historical events that have been difficult to integrate and accept, working through associated painful emotions, and moving towards the future (see also Longden et al., 2013).

Coping with Difficult Voices

Voices can command, demoralize, and be destructive, often intruding and trapping the VH in isolation, passivity, and destructive activities. Many voices become threatening when the VH tries to disobey them, yet they also tend to grow more dominant and controlling when the individual sets no limits. Supporting VHs is a creative endeavour, comparable with family therapy. While voices have their own (albeit limited) repertoire of strategies to assert control, the VH can develop new techniques to address the voices and learn to set their own limits.

Acquiring more control through anxiety reduction and decreasing voice frequency and intrusiveness are important first goals. Providing reassuring information can reduce anxiety levels considerably; creating hope in a situation that appears devastating empowers the VH. Temporarily prescribing medication may also be helpful in reducing anxiety. However, antipsychotic medication does not always have a lasting impact on voices (see Corstens, Longden, Van Os, Rüdinger, & Bentall, 2013). They also reduce the person's intensity of affect, which may be useful in the short term but may diminish recovery prospects in the long term (Harrow, Jobe, & Faull, 2014; Wunderink, Nieboer, Wiersma, Sytema, & Nienhuis, 2013) because coping with emotion is not learned. However, benzodiazepines can be successfully prescribed short term to diminish anxiety. When chronic low mood triggers the voices, antidepressants may also help.

Creating 'space' and boundaries is something the VH can achieve by setting time for listening to the voices instead of trying to constantly avoid them. In practice, we discuss different ways of responding to the voices with the VH, which we call 'hearing', 'listening to', or 'obeying' the voices. 'Listening', which we feel is the optimal approach, involves being receptive, reflective, and asking mainly neutral questions of the voices, while not reacting to their responses too strongly. This can be practised in therapy sessions with the VH. Time-limited listening should be coupled with dismissing and boundary-setting for the voices at other times of the day, which we call 'hearing'. VHs can negotiate with the voice(s) about this in a dialogical way: for example, 'I will listen to you and be there for you 30 minutes every day (e.g. between 18:30 and 19:00) but I ask you not to bother me outside of that timeframe'. 'Hearing' the voices we consider to be (emotionally or dialogically) neglecting the voices and hearing them somewhere in the background, like street noises. To learn to neglect the voice(s) is an important strategy for learning to cope with the voice(s), but should not be considered the only one. VHs may be advised to ignore (the content of) the voice(s), but this kind of suppression can often have the opposite effect, like 'do not think of a black cat'. In combination with 'listening', however, 'hearing' becomes a useful strategy – engaging and focusing on the voices at some times, combined with disengaging from them at other times. In contrast, 'obeying' the voices is usually not a helpful option, unless it is the VH's own informed choice

(for example, some voices are considered a useful source of guidance and support; Jenner, Rutten, Beuckens, Boonstra, & Sytema, 2008).

Making one's own choices, resisting voice commands, and keeping a diary about the voices are all means to acquire more distance between the voices and the VH. Discussing the ways in which the VH interprets their voices (e.g. as paranormal, spiritual, or religious experiences) is often not very productive, unless it occurs as a sort of Socratic dialogue, as is done in cognitive behavioural therapy. The VH's interpretations can, however, suggest underlying emotional themes. Finally, the VH should be supported to learn to give up the role of 'victim' and take responsibility for their own life and recovery (Coleman, 2011). This process can often be stimulated when the 'code' is broken and the meaning of the voices in relation to one's life history is made clear. Further self-help suggestions for VHs are provided by May and Longden (2010) and Smith, Coleman, and Good (2003).

Accepting the Past and Processing Associated Emotions

Certain feelings, such as anger, guilt, and shame, along with issues related to sexuality, may be severely repressed in a VH; it is often the case that the voice's emotions reflect the hidden emotions of the individual. Creating a compassionate, supportive social environment can be extremely valuable, whether within a formal Hearing Voices Network, a peer-support group, or other social relationships that can increase the capacity to work through traumatic memories, along with associated feelings of anxiety, guilt, and despair. Practising expressing difficult emotions in social situations, as is done in assertiveness training, or support with socializing can help VHs with the process of expressing painful feelings. Participating in peer-support groups is often particularly welcomed, because stigma is minimized and positive acceptance as someone who hears voices (instead of as a psychiatric patient) can increase self-esteem (Dillon & Hornstein, 2013). In these networks, VHs help other VHs, supporting further integration in a social environment.

As discussed previously, VHs have often been exposed to adverse events. They may re-experience traumatic memories, partly in their voices but also in (other) dissociative experiences such as depersonalization, derealization, numbing (often interpreted as so-called 'negative symptoms'), amnesia, re-enactments, and nightmares/insomnia. As such, finding ways to safely contain and process distress is extremely important (e.g. Boon, Steele, & Van der Hart, 2011; Herman, 1992; Ross & Halpern, 2009). Many people who are identified as 'psychotic' are denied access to psychotherapeutic intervention on the false premise that discussing voices, or other 'psychotic symptoms', will cause deterioration. However, it is likewise important that psychotherapy is conducted by experienced practitioners who are used to dealing with trauma and strong transference reactions.

Talking with Voices

Voices are a personal reality. While an aim of many VHs and professionals has been to try to eliminate the voices, our experience has taught us that a more realistic objective is to learn to accept and cope with them. Inspired by the practice and method of Voice Dialogue (Stone & Stone, 1989), and guided by an experienced Voice Dialogue therapist, Robert Samboliev, we developed a method to communicate directly with voices.

This approach is similar to that used in the dissociative disorders field in the treatment of persons with dissociative identity disorder (DID), where an emphasis is placed on making contact with split off parts of the personality in order to achieve therapeutic change.

In the Voice Dialogue method (designed for working with non-patients who do not hear voices), every person is viewed as consisting of many individual selves or sub-personalities, each with its own personal history, physical characteristics, emotional and physical reactions, and ways of perceiving the world (Stone & Stone, 1989). These selves are organized in opposites, called *primary* and *disowned* selves. Voices, more specifically ego-dystonic voices, could be interpreted as disowned (or dissociated) selves, relating to difficulties in tolerating emotions and to other adverse experiences in the VH's life. In Voice Dialogue practice, the facilitator (not referred to as a 'therapist') makes contact – talks – with the sub-personalities in an exploratory way by asking ordinary questions, similar to those we would ask when we want to get to know someone to whom we've just been introduced. Questions like 'what is your role?' or 'what would happen if you weren't there?' can evoke a good understanding of a specific sub-personality and create an energetic contact. Exploring the sub-personalities, initially the primary and then the disowned, creates space in the person and a kind of *meta-position* that is called an 'Aware Ego' (similar, in some ways, to mindfulness) – an operating ego of sorts that bridges the tension between the opposite selves and makes the person aware of the different selves they contain. In this regard change is not the aim but a by-product, in which awareness can help create distance and choice. In the process of Voice Dialogue, this awareness supports a more conscious use of the capacities one has.

The theory of Voice Dialogue offers an easily understood explanatory model of voices as different sub-personalities or selves, and its accepting and non-pathologizing attitude presents a non-judgemental way for a VH to relate to their voices (their first book was called 'Embracing our Selves'; Stone & Stone, 1989). The interpretation of the primary selves as protective, although manifesting in a harsh and rigid way, offers a comparative and positive image of voices.

In our 'Talking with Voices' approach, we question the voices directly (asking the VH to let the specific voice speak 'through' them by repeating its responses verbatim) or indirectly (the VH paraphrases what the particular voice has said). We try to discover their aims and original protective functions, which in many cases have become suppressed and distorted when the VH didn't know how to cope. The facilitator tries to help the VH recognize and acknowledge the original positive, protective, function of the voice, and change their attitude to it in order to create a more peaceful and constructive relationship (see Corstens, Longden, & May, 2012; Corstens, May, & Longden, 2012; Moskowitz & Corstens, 2007; Moskowitz, Corstens, & Kent, 2011).

Future Directions for the Maastricht Approach

The Maastricht approach rejects the conception of voice hearing as a meaningless pathological symptom and, instead, emphasizes the need to place the experience within an interpersonal context, supporting VHs to develop more positive and empowered relationships with their voices, and discovering ways to cope with both the voices themselves and the underlying emotional vulnerabilities and conflicts which the voices might embody. Thus the Maastricht approach encourages and

facilitates recovery models and psychosocial interventions, wherein the focus is not on clinical 'cure' and voice elimination, but on healing, restitution, and emotional exploration. The approach is much valued among VHs themselves, as evidenced by the global dissemination of the Hearing Voices Movement over the past two decades, and in this regard its practices and philosophies require little substantiation beyond the fact that VHs find them beneficial and choose to be involved. However, a similar anecdotal approach cannot be applied to therapeutic interventions intended for clinical use, and there is need for more rigorous evaluations of the effectiveness and utility of this approach, both within and outside publicly funded services. This includes investigations that uncover how strategies like the Construct might effectively contribute to recovery and treatment planning, understanding indications and contraindications of Talking with Voices for patients with and without comorbid psychosis, and under what circumstances a strongly psychosocial approach might feel unacceptable for individual VHs. To address this issue, a clinical trial utilizing a multiple baseline case series design is currently underway (UK Clinical Trials Gateway, 2015), with other initiatives for assessing feasibility and acceptability in preparation.

On a more theoretical level, the issue of dissociation as an explanatory framework for voice hearing needs further elaboration (see Chapter 13 of this book). In clinical practice there is often a distinction made between the dissociated parts of the personality in DID, where amnesia is common, and voices that can be experienced inside or outside the person (or both) with the absence (usually) of amnesia. But is this simply a different level of dissociation, or are the aetiological processes different? And what might voice content tell us about the degree of dissociation? As Corstens et al. (2014) have noted:

> 'Within HVM [Hearing Voices Movement] conferences, there has been a move toward people describing embodied experience of voices and voices as "parts" of the voice-hearer themselves. These are multisensory experiences that the word "voice-hearing" does not adequately capture. The HVM also needs to be aware of, and responsive to, people's experience of visions and other sensations above and beyond auditory phenomena.' (p. S.292).

A final consideration is the extent to which the Maastricht approach could be developed through greater integration with complementary therapeutic techniques. For example, models for working with complex trauma and structural dissociation (e.g. Ross & Halpern, 2009), compassion-focused therapy (e.g. Gilbert, 2009), and related approaches like acceptance and commitment therapy (e.g. Hayes, Strosahl, & Wilson, 1999) and mindfulness (e.g. Chadwick, Taylor, & Abba, 2005) inform how to cope with voices and reflect many attitudes and strategies inherent in the Maastricht approach. As emotionally overwhelming life events/traumas play a pivotal role in the Maastricht framework, there is also a strong need to understand the impact of trauma-focused therapies on outcome. An important recent study from Van den Berg et al. (2015) demonstrated positive effects of both prolonged exposure and Eye Movement Desensitization and Reprocessing (EMDR) for patients with PTSD and psychosis. Though this is encouraging, specific-outcome research for traumatized VHs is also needed, considering as well how EMDR may impact other aspects of voice hearing, such as the relationship between voices and the VH, coping with voices, and recovery issues (see Chapter 25 of this book).

Summary

The Maastricht approach to hearing voices offers an alternative to traditional attitudes in psychiatry. In this approach, voices are seen as meaningful phenomena originating in the personal history of an individual who has been overwhelmed by threatening emotions. Systematically interviewing the VH with the MHVI, and formulating a construct in order to discover who and what problems the voices may represent, breaks the code of defence, promotes communication with the voices, and signals a path for a recovery plan that can lead to positive changes in the relationship between the voices and the VH. Several techniques to support individuals to take more control over their voices and their lives can be applied, including (for those who can engage with their voices) techniques derived from Voice Dialogue. Empowerment and recovery are key objectives. Ultimately, the psychotherapeutic attitude is embedded within a social psychiatric approach wherein support is promoted via positive information, an encouraging attitude towards VHs, and national and international networks of VHs who discover the strength of mutual support and creative ideas.

Notes

1 In the professional literature, voice hearing is usually referred to as *auditory* or *verbal hallucinations*. We will, however, use the term 'voices' throughout this chapter, which we feel is more consistent with the ways in which voice hearers themselves describe their experiences.
2 It is also possible that trauma produces a dissociative state, so that individuals do not remember what was happening at the time the voices began. We recommend using the Dissociative Experiences Scale (Bernstein & Putman, 1986) before the MHVI in order to get some indication of the severity of dissociation.
3 It is important to be aware that VHs may feel so ashamed or guilty by what the voices express that they feel unable to articulate it. The voices themselves may also forbid the VH to talk about them, or the individual might actively avoid attending to voice content. We have often observed that the more control the person has over the voices, the easier it is to discuss them.

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25

Trauma Therapy for Psychosis?

Research and Clinical Experience Using EMDR with Psychotic Patients

Anabel Gonzalez, Dolores Mosquera, and Andrew M. Leeds

Eye Movement Desensitization and Reprocessing (EMDR) therapy is a psychotherapeutic approach with broad and growing empirical support. It is an internationally recommended approach for post-traumatic stress disorder (PTSD), and its efficacy and efficiency have been recognized in many national and international treatment guidelines, including those of the World Health Organization (2013), American Psychiatric Association (2004), International Society for Traumatic Stress Studies (Foa, Keane, Friedman, & Cohen, 2009), Cochrane Database of Systematic Reviews (Bisson, Roberts, Andrew, Cooper, & Lewis, 2013), and British National Institute for Clinical Excellence (Bisson et al., 2005).

The application of EMDR therapy to psychotic disorders is an area of emerging research with several systematic studies and case reports that will be summarized in this chapter. Approaches to using EMDR with psychotic disorders will be illustrated by several cases.

The most obvious utility of EMDR therapy in psychotic patients is to treat comorbid traumatic experiences and the 'trauma of being psychotic'. The psychotic process itself can be an overwhelming experience due to the primary symptoms, the treatment process (which can include involuntary hospitalizations, physical restraint, isolation, and significant medication side-effects), and the consequences of having a chronic and disabling disease. The main conceptualization of psychosis as an organic, biological disorder, genetic in origin, for which the only effective treatment is medication, has left many patients without the option of psychotherapeutic treatment. Many mental health professionals consider 'introspective' psychotherapy for psychotic patients to be contraindicated or even 'potentially toxic', as was stated in the first PORT Study (Schizophrenia Patient Outcomes Research Team, Scott & Dixon, 1995, p. 627). Evidence for the safety and efficacy of CBT treatment for psychoses remains mixed (Jones, Hacker, Cormac, Meaden, & Irving, 2012; Klingberg et al., 2012). In many countries psychological interventions are limited to psychoeducation about neurotransmitters, symptoms, and medication.

But the role of trauma in psychotic disorder probably goes beyond the 'trauma of having the disorder'. The interaction between trauma, dissociation, and psychosis cannot be understood from a simplistic point of view; it is widely explored from different

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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perspectives throughout this book. Traumatic experiences can be related to the triggering of psychotic episodes. They can also influence the content of hallucinations and delusions. Traumatic experiences can modify brain function or structure (Bremner, 2006; Chapter 10 of this book), promoting the development or maintenance of psychotic symptomatology. Could EMDR therapy help us to explore these areas? Shapiro (2010) proposed the use of EMDR therapy to discriminate the role of unresolved adverse and traumatic experiences in different clinical diagnoses. Since EMDR therapy is characterized by its recognized efficacy and a high efficiency for resolving maladaptively encoded adverse experiences, it would make sense to work on the 'traumatic layer' and observe if the psychotic symptomatology is modified. By doing this, we could acquire a new perspective that could help us to identify and understand the interaction between trauma and psychosis.

A relevant issue for the use of EMDR therapy in psychotic disorders is the complex relationship between dissociation and psychosis. Patients presenting with the belief of being controlled by an external force, with intrusive thoughts, and with hallucinatory voices that comment on one's thoughts or actions or that have a conversation with other hallucinated voices, are often diagnosed as schizophrenic or psychotic, but many of these patients can best be understood and approached as suffering with dissociative symptoms (see Chapters 4, 12 and 13 of this book). Patients with both dissociative disorders and psychotic features can be treated with EMDR therapy, but the procedures may require relevant modifications from the standard EMDR protocols for PTSD (Gonzalez & Mosquera, 2012; International Society for the Study of Trauma and Dissociation, 2011).

In this chapter we will describe how EMDR may be applied in cases of persons with psychotic symptoms and, based on these clinical examples, we will reflect on the issues raised above.

Basic Notions about EMDR Therapy

EMDR is an integrative psychotherapeutic approach. Within the field of EMDR therapy, psychopathology is understood through the 'adaptive information processing' model (AIP; Shapiro, 2001), which hypothesizes that unresolved and dysfunctionally stored past experiences are the source of present symptoms. In the AIP model, all humans are understood to have an innate, physiologically based, information-processing system that processes the multiple elements of our experiences and works to store memories in an accessible and useful form. Memories are linked in networks that contain related beliefs, images, emotions, and sensations. Learning occurs when new associations are forged with material already stored in memory.

When adverse or traumatic experiences occur, information processing may be incomplete, perhaps because strong negative emotions or dissociation interfere with information processing or because of insufficiently developed or accessible adaptive information or capacities. This incomplete processing of experiences prevents the forging of connections with more adaptive information that is held in other memory networks. The memory is then dysfunctionally stored without appropriate associative connections and with many unprocessed elements. When the individual thinks about the traumatic experience, or when the memory is triggered by similar situations, the person may feel as if he or she is reliving it, or may experience maladaptive thoughts, emotions, physical

sensations, and coping responses. Prime examples are the intrusive thoughts, emotional disturbances, and negative self-referencing beliefs experienced by those with posttraumatic stress disorder (PTSD).

EMDR therapy uses an eight-phase approach. It takes into account past experiences that have set the foundation for pathology, current situations that trigger dysfunctional emotions, beliefs, and sensations, and positive experiences needed to enhance future adaptive behaviours and mental health.

In the standard model of EMDR therapy for PTSD, after completing two initial phases, history taking (phase 1) and preparation (phase 2), the therapist guides the EMDR reprocessing of selected targets. During the reprocessing phases (phases 4, 5, and 6), the patient attends to past memories, present triggers, or anticipated future experiences while maintaining a dual focus of attention between the selected target and alternating, bilateral sensory stimulation (BLS). Most commonly, this involves using bilateral eye movements but it can involve alternate types of BLS (auditory tones or tactile stimulation). During reprocessing, patients experience decreases in the vividness and emotionality of the target memory, together with the emergence of insight, changes in memories, or new associations. In contrast to the procedures in prolonged exposure, in EMDR therapy the patient is deliberately asked to focus on the selected target material only for brief intervals, and is not required to recite a detailed narrative (Lee, Taylor, & Drummond, 2006). During sequences of sets of bilateral stimulation, the patient may report any combination of physical sensations, emotions, images, or other life experiences. Periodically, the patient is asked to return their attention to the initially selected target to identify any residual disturbing material. When the target is no longer disturbing, reprocessing continues with deliberately linking an adaptive self-statement to the target (such as 'I am worthy' (phase 5). The last phase (phase 6) of reprocessing involves verifying the integration of the positive self-statement into the target experience by checking for any unpleasant physical sensations. Each session concludes with a structured closure (phase 7) to assure patient stability and each subsequent session begins with a re-evaluation (phase 8) to verify stable treatment gains and to make adjustments to the treatment plan.

After past memories are resolved, reprocessing continues as needed for current triggers and later for mental rehearsal of future behaviours to overcome any residual avoidant impulses or anticipatory anxiety. After successful EMDR reprocessing, patients generally report that the emotional distress related to the memory disappears, and new insights, self-perceptions, and coping behaviours are manifested.

The Evidence for EMDR Therapy's Effectiveness in Psychosis

There are several descriptions of positive results in single cases of EMDR treatment for psychotic symptoms in a range of disorders (including PTSD and depression; DiBerardino & Milardi, 2003; Hamilton, 1998, 1999; Miller, 2006).

In 2006, Miller described a series of clinic cases of schizophrenia, severe depression with psychosis, and delusional dysmorphophobia (excessive dislike of a part of one's body) successfully treated with EMDR therapy. In a follow-up report more than four years post-EMDR treatment, one patient, who had presented with schizophrenia, remained off medications and symptom-free (Miller, 2011). Based on his clinical

experiences, Miller (2010) proposed a specific EMDR protocol for psychosis, called Indicating Cognitions of Negative Networks (ICoNN), focusing more on positive cognitions than negative ones or somatic sensations. Miller adopted the concept of dissociative schizophrenia from Ross (2004) in his therapeutic protocol, introducing only minor adaptations when dissociation is a prominent feature, such as grounding techniques during reprocessing.

Van der Berg and Van der Gaag (2012) conducted an uncontrolled open trial pilot study ($N = 27$) of EMDR treatment of comorbid PTSD in psychotic disorders based on the argument that having a psychotic disorder should not be an exclusion criterion for psychotherapeutic treatment of PTSD symptoms. After a maximum of six sessions of EMDR treatment, they found EMDR therapy to be highly effective in alleviating PTSD symptoms, with no evidence for adverse effects. Moreover, despite not being directly targeted, auditory verbal hallucinations (AVH) and delusions also decreased (along with anxiety and depression), while patients' self-esteem improved. The drop-out rate was less than 20%. Looking at the results in more detail, there are some interesting findings and implications. The pilot study actually reported the disappearance of AVH in most of their participants, but a significant minority (who had the most severe AVH) did not show any improvement. This might mean that these AVH were not trauma related, but could also suggest that these patients required a modified EMDR protocol; since dissociative disorders were not screened for in this study, these patients could represent a highly dissociative subgroup, whose AVH represented parts of the personality. EMDR treatment of patients with a dissociative form of psychosis might benefit more fully from the same adaptations as those applied to patients with diagnosed dissociative disorders (Van der Hart, Groenendijk, Gonzalez, Mosquera, & Solomon, 2014a, 2014b). These results can be contrasted with the findings from a more extensive study by Frueh et al. (2009), who investigated the effects of 11 weeks of cognitive-behavioural intervention for PTSD among adults with schizophrenia or schizoaffective disorder. They reported significant PTSD symptom improvement, maintained at follow-up after three months, with no adverse events. However, in contrast to the EMDR therapy study above, they reported a 35% drop-out rate and lack of improvement in depression, general anxiety, social activities, or physical health status. Changes in psychotic symptoms were not assessed for.

De Bont, Van Minnen, and De Jongh (2013) conducted a study of 10 patients with comorbid PTSD and psychotic disorders, to examine the efficacy and safety of EMDR therapy and prolonged exposure (PE) in treating PTSD. PE and EMDR therapy were equally effective and safe. Eight of the 10 patients completed the full course of treatment which included up to 12 active treatment sessions. Seven of the 10 patients (70%) no longer met the diagnostic criteria for PTSD at follow-up. No serious adverse events or worsening of symptoms occurred. Limitations of this study included the small sample, the brief (three-month) follow-up, and the exclusive use of bilateral auditory tones rather than bilateral eye movements (which have been shown to be more efficacious; De Jongh, Ernst, Marques, & Hornsveld, 2013). An additional limitation is that the study did not apply the full three-pronged protocol for PTSD (Shapiro, 2001), by focusing only on past traumatic targets meeting PTSD criteria (omitting present triggers and future concerns); the authors also did not screen for dissociative symptoms or disorders.

The same team published a randomized controlled trial on psychotic patients ($N = 155$) with PE, EMDR therapy, and wait list (WL) groups (Van den Berg et al., 2015).

Participants were randomized to receive eight weekly 90-minutes sessions of PE (n = 53), EMDR therapy (n = 55), or WL (n = 47). Standard protocols were used, and treatment was not preceded by stabilizing psychotherapeutic interventions. Participants in the PE and EMDR therapy conditions showed a greater reduction of PTSD symptoms than those in the WL condition. Between-group effect sizes were 0.78 ($p < 0.001$) in PE and 0.65 ($p = 0.001$) in EMDR. Participants in the PE condition (56.6%) or the EMDR condition (60.0%) were significantly more likely to achieve loss of PTSD diagnosis during treatment than those in the WL condition (27.7%). Participants in the PE condition (28.3%), but fewer in the EMDR condition (16.4%; non-significant), were more likely to gain full remission than those in the WL condition (6.4%). Treatment effects were maintained at the six-month follow-up in both PE and EMDR. Similar results were obtained regarding secondary outcomes. There were no differences in severe adverse events between conditions (2 in PE, 1 in EMDR, and 4 in WL). The PE therapy and EMDR therapy groups showed no difference in any of the outcomes and no significant difference in participant dropout (24.5% in PE, 20.0% in EMDR). As in the previous study, no dissociation measurements were included in the treatment design. In spite of this, standard PE and EMDR therapy protocols seemed to be effective, safe, and feasible in patients with PTSD and severe psychotic disorders, including current symptoms. The authors concluded that the a priori exclusion of individuals with psychosis from evidence-based PTSD treatments was not justified.

McGoldrick, Begum, and Brown (2008) reported EMDR treatment of olfactory reference syndrome (ORS), a subtype of delusional disorder in which there is a persistent, false belief about emitting abnormal body odours which are foul and offensive to others. Their article describes brief EMDR treatment of four consecutive cases of ORS whose pathological symptoms had persisted from eight to 48 years. The administration of EMDR therapy consisted of reprocessing the various life experiences that seemed to cause and/or trigger the pathology. Treatment with EMDR therapy resulted in a complete resolution of symptoms in all four cases, which was maintained at follow-up. While four cases is a limited sample, ORS is a rare diagnosis, typically with a poor prognosis, so these positive results obtained with brief EMDR treatment appear impressive.

Kim et al. (2010) presented a pilot study with 45 acutely psychotic schizophrenia inpatients. Participants were assigned to treatment as usual (TAU), TAU plus three sessions of EMDR therapy, or progressive muscle relaxation. They found that the use of the standard EMDR therapy protocol for PTSD on targets related to traumatic memories, or the disturbing consequences of the psychotic symptoms themselves, was well-tolerated even during the acute phase, and did not increase the patients' symptomatology. But the results failed to confirm the effectiveness of the treatment over the two control conditions (TAU and relaxation). These results can be related to the limited sessions included in the EMDR protocol – three in this study, compared to eight in the RCT of Van den Berg et al. (2015) and up to 12 in the pilot study of De Bont et al. (2013). It would make sense that EMDR therapy may be less effective when the brain is overly disturbed in the acute psychotic state. Bilateral stimulation is proposed to enhance information processing systems in the brain, but it is likely that during the acute phase of psychosis, processing of information is severely disrupted, so attempts to enhance the AIP system fail under those conditions.

Clinical Cases

The treatment of psychotic disorders with a specifically trauma-oriented psychotherapy, such as EMDR therapy, can help us to evaluate the relation between trauma and psychotic symptoms. By reprocessing traumatic experiences, we can see in some cases a modification of specific symptoms that seem to be connected with those memories; symptoms cease or decrease and patients function better. In these cases, clinical experience seems to confirm the hypothesis that unresolved adverse and trauma experiences exacerbate or directly cause psychotic symptoms.

The study of individual cases provides a different perspective than the results of systematic research, as unique connections between experiences and symptoms can only be understood from the study of individual cases. These cases are also important, as many patients cannot be included in empirical studies because they fail to meet inclusion criteria. They may be too severely disturbed or disconnected from reality to participate in such studies. We will describe some examples of psychotic patients treated with EMDR therapy to illustrate different combinations of biological, traumatic (acute and chronic interpersonal stress), and environmental factors (i.e. drug abuse) contributing to psychotic symptoms.

Case 1: Eating Is Forbidden

A 61-year-old woman, 'Margaret', presented with severe weight loss precipitated by delusional ideas. She was convinced that people communicated telepathically to her the message that, if she ate anything, something bad would happen to her daughter. She also believed that others were talking about her and looking at her in an odd, *special* way. As a consequence, she had serious difficulties with eating. Her health had become extremely fragile due to weight loss and agitation related to her fears.

Margaret was prescribed various combinations of antipsychotic and antidepressant medications, including some that usually caused weight gain as a side-effect, but nothing seemed to help. She attended the clinic twice a month, but her situation was so dangerous that the psychiatrist considered sending her to an inpatient facility. To avoid this, after all other therapeutic options failed, her therapist tried EMDR therapy.

The patient described her own mother as being distant and recounted many early childhood experiences of emotional abuse and neglect. When she was 20, she married an abusive man who forced her to work as a prostitute. After her daughter was born, Margaret returned to her parents' home. The symptom of food aversion first manifested at this time, along with repetitive behaviours and some obsessive symptoms. Later psychotic symptoms developed, being most extreme when she asked for psychiatric treatment.

During an EMDR therapy session focused on an image from when she was at her parents' home, she made many important connections between her present situation and her history. She said: '*I always felt like an animal …. My mother called me "goat". And since I felt like an animal, I did everything that my husband told me to do. I ended up working as a prostitute. I am the worst.*' Each of these reflections was spontaneously verbalized after sets of eye movements.

After several negative associations, some important insights occurred: '*When I was 20, I should have acted more like an adult, but I felt like a 2 year old little girl … so, when*

my first boyfriend left me I turned to my future husband, and I clung to him even when he later forced me to work as a prostitute.'

Positive associations were also made during the EMDR treatment: '*I feel like a person for the first time in my life.*' And finally she said: '*This is a revolutionary therapy, isn't it?*'

Memories related to her mother, to her experiences as a prostitute, and to her abusive husband were treated with the standard EMDR protocol, and after the first three sessions some of her symptoms began to improve. She gained weight and maintained a healthy weight, possibly as a consequence of the decreasing intensity and frequency of her delusions; she had the same ideas, but they had less influence on her behaviour. She became happier and took better care of her appearance. Her daughter reported that she was warmer and closer to her. Not all of her symptoms improved, but it seemed that EMDR therapy was able to produce critical changes, especially on problems that had been refractory to medication and which had threatened the patient's life.

In the standard model for treating PTSD, EMDR reprocessing is initially focused on memories of traumatic experiences. In psychotic disorders we may also reprocess internal experiences (such as delusions) or current triggers that exacerbate symptoms.

How can we understand this clinical picture from the perspective of the adaptive information-processing model of EMDR? In this case, the patient's psychotic delusions appeared to have had their origin in pathological guilt and irrational self-blame associated with early memories of dysfunctional attachment with the mother, with later emotional maltreatment from both the mother and the ex-husband, and the experience of being a prostitute. She believed that everyone around her was judging her negatively just as her mother and husband did in the past. She projected her extreme sense of guilt and self-blame onto other people. Her self-hatred was so intense that she was unable to accept basic nourishment. Observing the effects of EMDR reprocessing her memories of traumatic experiences led to an impression that her struggle to contain past traumatic experiences (dysfunctionally stored) had influenced the intensity of her symptoms and may have contributed to how refractory they had previously been to medication. If we consider that in more severe cases, those resistant to traditional approaches (medication, psychoeducation, supportive psychotherapy) may have a more intense trauma history, it makes sense that specifically resolving their traumatic experience could change the outcome.

Case 2: Can I Tell You Something? Working with Refractory Schizophrenia

Julio was a 21-year old man who had suffered from schizophrenia since the age of 16. He presented with many positive symptoms, including auditory hallucinations, delusional ideas that others believed he was gay (he denied this), thought diffusion (he thought that everybody could hear his thoughts), and many intrusive, bizarre ideas. His symptoms were refractory to several medications, and he was in a hospital day-care program for those with severe mental disorders because his problems caused severe impairment and difficulties in relationships.

In this case, the standard EMDR therapy procedure for traumatic memories was used from the beginning, focusing initially on the first episodes of the disorder, when the psychotic symptoms appeared. The patient did not refer to traumatic antecedents apart

from the onset of the psychotic symptoms. Memories of the days when his psychotic symptoms first appeared remained extremely disturbing to Julio. These memories were processed in two sessions with few interventions from the therapist.

During reprocessing he reported some noteworthy experiences. He said that his mental functioning was not as bad as usual (in his daily life apparently absurd thoughts or voices were constantly coming to his mind). He also reported that he was able to remember more relevant events from his history. During EMDR reprocessing, he said: 'Can I tell you something?' He then discussed several traumatic and disturbing memories: sexual games with a same sex schoolmate, other memories associated with sex and shame, physical maltreatment from his grandmother, and the rigid moral rules of his father and grandfather. Other memories were based on delusional experiences (such as his belief that he telepathically received some thoughts from his father, which were extremely upsetting) that remained dysfunctionally stored in much the same way as external, traumatic experiences. His mind seemed to have more access to information after sets of bilateral stimulation.

Julio's work with EMDR therapy allowed him to access memories that helped to explain some of his most refractory symptoms. His sexual experiences in childhood seemed to be connected to the delusion that other people thought he was gay. His family's inconsistent moral standards (actions did not match stated family values) created psychological barriers against reflecting on these experiences, so that they could not be elaborated and resolved by his innate information-processing system.

After Julio accessed memories of traumatic experiences occurring prior to the onset of his psychotic symptoms, and related to concerns about his sexuality (not only PTSD criterion A traumatic memories, but also unpleasant experiences), these earlier memories were reprocessed in a series of EMDR therapy sessions. After seven EMDR therapy sessions his concerns about being seen as gay and other people's thoughts about his sexuality substantially decreased, but ego-dystonic thoughts about hurting other people (he had never been aggressive) did not diminish to the same degree. Gradually, new memories related to violent and abusive behaviours from different family members emerged during his EMDR therapy, and some of them were successfully reprocessed, leading to a decrease in his violent thoughts, before he was discharged from the day-care hospital.

At time of his discharge, Julio's social relationships had improved, and his disturbing thoughts and 'voices' had substantially decreased. It should be noted that the refractory symptom that improved the most, concerns about his sexuality, was also the one whose associated memories were more completely reprocessed. It seems likely that the six EMDR therapy session protocol proposed for single-incident PTSD (Lee, Gavriel, Drummond, Richards, & Greenwald, 2002; Marcus, Marquis, & Sakai, 1997; Rothbaum, 1997) is not adequate when dealing with complex trauma cases such as this one.

Case 3: Dissociative Psychosis

Mark was a 40-year-old male who had received a diagnosis of schizophrenia, along with several other diagnoses. His daily functioning was severely impaired. Mark had been hearing voices for over 20 years, and talked with inanimate objects such as computers,

boats, and trains. He seemed to be emotionally numb. Many antipsychotic medications were tried, without any apparent effect on these symptoms. In the previous nine years he had been attending weekly therapy, which did not lead to any improvement in his functioning. He had also self-harmed from an early age and tried to kill himself on several occasions.

After exploring the voices, the patient was able to identify three distinct parts that he called 'bastard dwarf', 'dictator', and 'angry dickhead'. The initial work was focused on creating a collaborative attitude among parts with psychoeducation about their function, re-naming the parts as 'little dwarf', 'colleague', and 'angry part'. Modified EMDR therapy procedures were used over several sessions to overcome dissociative phobias between parts (Gonzalez & Mosquera, 2012). He gradually changed from being in a state of high internal conflict to developing self-compassion and empathy; as a result of increased collaboration between his parts, he stopped self-injuring.

With time, it became clear that these aggressive voices were expressions of emotional parts of the personality that contained childhood mental patterns. The purpose of some of them was to help Mark escape from traumatic memories and the hard reality of his current life. Others, particularly angry parts, contained the memory of a violent rape by three men when he was 15. The eventual reprocessing of this traumatic memory with EMDR therapy, conducted with the agreement of the entire internal system of parts, allowed the patient to make impressive changes. He began to become more active and expressive of his emotions, which were less extreme and disruptive. His mood stabilized and he was able to develop healthier relationships. As a consequence of these gains, his psychiatrist progressively decreased his medication. At follow-up two years later, Mark was free of psychotic symptoms, was taking good care of himself, and had ceased self-harming behaviours.

This case could be understood as a dissociative disorder misdiagnosed as schizophrenia, but as many authors in this book argue, the limits between schizophrenia and dissociation are not that clear or easy to define. Many patients seem to share both diagnoses or to present symptoms of both disorders. While EMDR therapy was able to eliminate psychotic symptoms in this case, this required some relevant modifications of the standard EMDR protocol.

Conclusions

Results from EMDR therapy research and clinical practice offer a different perspective for understanding how some symptoms that have been defined as psychotic can be influenced by traumatic experiences. AVH can reflect either psychotic cognitive processes or dissociated parts of the personality derived from or influenced by early dysfunctional attachment and later traumatic experiences. The Adaptive Information Processing model informs the EMDR therapy approach to case formulation in which we identify which past experiences remain dysfunctionally stored in the brain and continue to be the source for present problems and symptoms.

EMDR reprocessing of adverse or traumatic experiences and even directly targeting psychotic symptoms has been shown to reduce the symptoms of psychosis. This

raises significant questions about whether we should merely consider the alleviation of co-occurring PTSD in psychotic patients or whether some of the neural mechanisms by which EMDR therapy operates (see Lanius, Paulsen, & Corrigan, 2014) can directly mitigate the brain systems impaired by psychosis itself. Due to emerging strategies for the early use of modified EMDR therapy procedures in cases of severe dissociative disorders (Gonzalez & Mosquera, 2012), further questions arise about the role of EMDR therapy in the overlapping domain of schizophrenia and structural dissociation.

Systematic research in this field is growing, and it is possible that EMDR therapy may lead to symptomatic gains via different mechanisms in different clinical populations. Based on our series of cases, we believe it would be useful to organize future studies with different samples: patients with PTSD and a co-occurring psychotic disorder, patients with and without antipsychotic medications, psychotic patients without PTSD, and dissociative disorders with psychotic features that could be included in the concept of 'dissociative schizophrenia' (Ross, 2004). Due to the increasing interest in the overlapping domains of schizophrenia and structural dissociation, it would be important to accurately assess the extent of dissociative symptoms and disorders in future studies of psychotic patients being treated with EMDR therapy, using well-validated tools such as the Structured Clinical Interview for DSM-IV Dissociative Disorders-Revised (Steinberg, 1994, 2000) or the Dissociative Disorders Interview Schedule (Ross et al., 1989).

Clinical experience has taught us that standard EMDR therapy procedures should not be used early in treatment in highly unstable and complex cases (such as with life-threatening self-injury and an ongoing, active suicidal plan) without including important modifications. Adaptations are needed in the most complex cases of schizophrenia to proceed in a safe way. The approach to working with patients with severe dissociative disorders requires a different case-conceptualization and treatment plan from the one used in 'simple' PTSD (Forgash & Copeley, 2008; Gonzalez & Mosquera, 2012; Van der Hart et al., 2014a, 2014b). Furthermore, growing evidence supports the idea that there may be a subgroup of schizophrenic patients with prominent dissociative features who demonstrate more severe psychotic and comorbid symptoms and poorer functioning. Trauma-oriented psychotherapies are recommended for this group with special attention to underlying structural dissociation, as the consensus treatment model recommends in complex trauma cases (ISSTD, 2011).

While the debate over the relevance of trauma in the development of psychotic disorders is conceptually important, exploring the effectiveness of EMDR therapy and other trauma-oriented psychotherapies in treatment outcome studies with psychotic patients may help to address more clinically relevant questions. First of all, can trauma-oriented psychotherapies in general, and EMDR therapy in particular, provide an effective alternative to treatment with medication only for refractory cases of psychosis? And secondly, with regard to assessment and diagnosis: if EMDR treatment leads to a reduction in refractory hallucinations or delusions by processing memories of adverse life experiences underlying them, wouldn't this support the causal importance of adverse environmental situations for the development of psychosis? While the answers to these questions require more in-depth research, preliminary results from the existing studies appear to be promising.

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26

Treating Dissociative and Psychotic Disorders Psychodynamically

Valerie E. Sinason and Ann-Louise S. Silver

This chapter offers an overview of the psychodynamic treatment of psychosis and of dissociation. We believe that there is a final common pathway in the treatment of dissociative and psychotic disorders. The commonalities of these treatments demonstrate that they all unite in helping the patient to regulate affect (Ogden, 1989; Schore, 2002), diminish anxiety, and enhance trustfulness (Fromm-Reichmann, 1950, 1990; Karon & Vandenbos, 1981; Read, Mosher, & Bentall, 2004; Read & Ross, 2003; Prouty, 1994; Prouty, Van Werden, & Portner, 2002). The treatment philosophies all resonate with the best in child-rearing techniques in terms of containment and empathy. The frayed threads of personality and those of theoretical diversity come full circle in the healing of dissociative states, and with such healing comes the healing of the infernal mind/brain Cartesian dichotomy; as traumatic states heal, brain pathology converts to normalcy.

In entering the world of the patient with courtesy and caution, it is somewhat irrelevant whether the hurt has expressed itself through psychosis or a dissociative disorder. All we consist of are our perceptions. Reading a novel or looking at any work of art requires a 'suspension of disbelief' and entering the narrative, however broken or surreal, of a human being similarly does. Entering a psychotic or dissociative world is a powerful, painful, and transforming experience and, of course, only a shadow of the pain it causes to the patients. Common to both client groups is a fear of abandonment and an insecure or disorganized attachment. There is also an extra sensitivity to external impingements (Searles, 1979a, 1979b; Thompson, 1964).

However, there are also differences. With psychosis, the reality of the impingement, the relationship/abandonment/event, is translated into fragments of meaning that can sound surreal until traced back. With dissociative identity disorder, the reality of the impingement is broken, fragmented into different self-states. There is a structural difference. The alter personalities, especially the 'apparently normal personality' parts (Van der Hart, Nijenhuis, & Steele, 2006), despite unconscious distortions or internalized lies from abusers, speak from a shared external reality while some alter-personalities speak of a reality they have been forced to believe in. From a psychoanalytic point of view the main emphasis is on psychic reality, but whether that matches external reality also matters.

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
© 2019 John Wiley & Sons Ltd. Published 2019 by John Wiley & Sons Ltd.

Historical Background

In the early history of psychoanalysis, dissociative disorders were not split off from psychosis the way they have become in our current DSM-dominated era. Diagnoses were more casual and fluid. Accordingly, we do not make hard, categorical distinctions between these two problem areas in this historical sketch. 'Reintegration' for someone with 'schizophrenia' is not differentiated from reintegration in dissociative disorders. In each case, it means regaining a dependable sense of confidence in one's self and in one's actions in social situations and, as a result, a decrease in loneliness (Fromm-Reichmann, 1959) and a return in the ability to think about and plan for the future – that is, to experience a dependable sense of hope.

The history of psychoanalysis, schizophrenia, and dissociation could be said to begin with Sándor Ferenczi (1931, 1933, 1988). Ferenczi brought what was called a 'maternal' quality to the work, a gentleness that produced a safe enough place for the patient to reveal her, or his, regressed and fragmented aspects. He firmly believed that his patients reporting sexual trauma were not typically fabricating, and urged Freud to reconsider his earlier work when he, too, had believed his patients' reports of abuse. Freud experienced Ferenczi as threatening the core of the new science of psychoanalysis – the universality of the Oedipus complex. Ferenczi saw Freud as overlooking the earlier centrality of the mother–infant bond. It is no coincidence that Freud saw countertransference as a problem requiring further analysis, whereas Ferenczi, from a more relational frame of reference, found it the key to understanding the patient. Ferenczi stayed with his patients as long as was necessary.

Ferenczi impressed Harry Stack Sullivan during his time in the United States (lecturing and conducting seminars in New York and Washington) in the winter of 1927–1928. Sullivan saw Ferenczi as having an orientation closer to his than any of the other European analysts. He (Sullivan) strongly influenced Clara Thompson and Frieda Fromm-Reichmann, setting in motion the Washington-based interpersonalist approach which through its New York branch, the William Alanson White Institute, became today's relational school of psychoanalysis (Fromm-Reichmann, 1950; Silver, 1989, 1993, 1997; Sullivan, 1953).

In 1924, Otto Rank moved to the USA where he lectured widely (Rank, 1996; Lieberman & Kramer, 2012). He so deeply impressed the young Carl Rogers that Rogers spent his career developing Rank's perspective (Kramer, 1995a, 1995b). Rogers in turn influenced Garry Prouty, the founder of pre-therapy, whose treatment strategies are fundamentally the same as Sinason's (Prouty, 1994; Prouty et al., 2002). Pre-therapy is a validated, structured method for reaching the severely regressed and withdrawn, mute, and terrified patient, using particular principles and techniques. These include repeating the patient's utterances, keeping observations limited to statements about the immediate environment, and not limiting the session time to the usual 50 minutes. The therapist aims to make contact with the patient so that the patient becomes available for the next step, the therapeutic relationship. Sinason's case examples to follow demonstrate the fundamental common ground of those working psychoanalytically with people labelled 'schizophrenic' or 'mentally retarded' or suffering from 'post-traumatic stress disorder' or 'dissociative disorders', and the common ground of their professional forebears.

Ferenczi's creative use of countertransference and Sullivan's participant observation were concepts with considerable overlap. Both these pioneers found early childhood events to be crucial in the later development of psychopathology. They both saw that the lived culture plays a vital role in personality development; we do not simply dwell in the intrapsychic. Frieda Fromm-Reichmann arrived in Washington in 1935, having trained at the Berlin Psychoanalytic Institute, where Karen Horney was among the founders and teachers. Both of them worked closely with Georg Groddeck. Fromm-Reichmann dedicated her classic book, *Principles of Intensive Psychotherapy*, to 'my teachers, Sigmund Freud, Kurt Goldstein, Georg Groddeck, and Harry Stack Sullivan.' This book represents one of the two courses Fromm-Reichmann gave at the Washington School, the other course being 'The assets of the mentally ill.' This is the therapeutic legacy from which Ann-Louise Silver draws.

Clinical Vignettes

Of all the various symptoms of mental disorders, the most unnerving is dissociative identities. We feel we have an alliance with the person we are talking with, and then discover that there are 'others' in the room, not hallucinations, but alters. They may hold the patient's antisocial aspects, and they skulk around. How often do we dissociate our frightened self, in order to work 'comfortably' with such a patient? However, we find out most clearly that this client group demands and deserves a level of transparency and non-defensive self-knowledge more than any other group. Harold Searles, who worked extensively with people he considered schizophrenic, observed:

> Another technique … is that of one's dealing with the other person upon two (or perhaps even more) quite unrelated levels simultaneously. This tends to require the other person to dissociate his participation in one or another (or possibly both) these levels, because he feels it to be so crazily inappropriate that he should find himself responding in terms of that particular level, since it seems to be utterly unrelated to what is going on at the other, more conscious and overt, level (Searles, 1965, pp. 257–258).

All names have been changed in the following vignettes.

Ann-Louise S. Silver

The emergence of 'multiples' is not merely frightening, but horrifying; one has left one's office and entered a horror movie made real. The person one knew has instantly transformed herself or has been transformed. The therapist inevitably reveals her astonishment and fear in her facial expression. I was deeply shaken by a young partially deaf woman I had been working with for over a year, meeting four times weekly at Chestnut Lodge. Twenty-two-year-old Sarah had felt isolated from the deaf community since she was not fluent in sign language, and could not keep up with the rapid sign language chatting among her classmates at the nearby deaf university. She was able to lip-read and to talk clearly, something almost all her classmates could *not* do, but again, her

understanding was incomplete. Her deafness was the result of a viral illness that struck when she was two-and-a-half years old. Only in reading was she on equal ground in each setting, and she fantasized about becoming a writer, but couldn't imagine what she would write about other than her loneliness. She couldn't fit in in either the hearing or the deaf community, struggling to create a different working false self in each setting. She had repeatedly and increasingly more severely cut herself to relieve her tension, and was contemplating jumping from a bridge into a ravine far below.

Sarah's parents had divorced when she was 12 years old. They lived on opposite coasts in the USA. She and her mother had never 'connected', and neither of her parents had studied sign language beyond its rudiments. There were no siblings. Her father was addicted to cocaine and died at an early age of a heart attack during the course of my patient's therapy.

The work had gone along seemingly well, and Sarah was returning to classes at the deaf university. She became increasingly anxious and discouraged as her old symptoms returned in that environment. She began losing large chunks of time, and fellow students gave reports about how she had been acting so differently. They were saying she was no longer shy, and wondered if she was using street drugs. We both became increasingly tense as the extent of her dissociative identity disorder became clear. She arrived at one session, agitated: 'I found this in my purse. I don't know how it got there. I think Rachel did this.' She handed me the paper, a receipt from a gun store for a pistol, which had been placed on order. We called the store and cancelled the order, but with no assurance 'Rachel' would not try again. 'Rachel' had not yet appeared in the sessions; both patient and therapist dreaded her appearance. Was the gun to be used in suicide, or a 'murder' of one personality by another, or was 'Rachel' targeting someone who was infuriating her? I assumed I was on her 'hit list'. Sarah berated me that I was not an expert in treating 'multiples', and that she needed to find one. She thought, too, that she needed to be with her mother, especially now that her father had died a few months earlier. She went across the country, found an expert, worked with her for about a year … and then committed suicide (by overdose). I had only half-heartedly tried talking her into staying, feeling I was too frightened of 'Rachel' to be able to work with her. I experienced her as not quite fitting in in my treatment community.

Mark is a 38-year-old single Catholic man, a middle child, and his father was a self-made charismatic millionaire. Mark connects his psychotic breakdown in his late twenties to his reluctantly agreeing to two abortions his then girlfriend endured, but he also insists that he had worked through this trauma with his previous analyst-therapist. The problem 'really' began on a trip to South America where he experimented with hallucinogens. When he returned home, these chemicals allowed 'interstellar forces' and the FBI and CIA to conspire to use him in their experiments. They invaded his body and mind. He panicked and entered a church while carrying a pistol, and then tried outrunning the police in a near-fatal chase, which he later documented in a detailed and coherent essay. Many hospitalizations and medication regimens followed, and four years later his bewildered and anxious psychiatrist referred him to me, having heard me speak on the psychotherapy of psychosis. This young psychiatrist firmly refused even to serve as an interim therapist, and wanted no progress reports.

Mark and I worked together for five years, in weekly sessions. He appreciated my 'believing' him and thus 'believing in' him, because, 'You have not confronted me with

Reality like everybody else'. I encouraged him to tell me what was happening in his mind (his reality), to quote his remarks and those of the voices he heard. I transcribed these conversations on my laptop as he lay on the analytic couch, and gave him copies. For the first year or more, his daily 'work' was conferencing with and bantering with the individuals from the interstellar community designated to work on and with him. His problem with dissociation was obvious in his self-reflections: 'I usually exist without thought – so I know if something comes into my mind, it's foreign. I'm just static in my mind.' In this session transcript, the voices' remarks are in italics. Mine are in brackets.

> The voices said: '*Lay down on the couch. It's the old way*.' They're happy. Everything I'm going to do now is them. How does it feel now to talk to her? They are trying to finish up their conversation. They're saying it might not work. *How do you know this isn't what we had in mind*? This is a huge deal for them – to do this. They want me to let you know I'm special – really really special. *If you knew how special this kid was, you'd crap your pants*.
>
> [Meant for great things?] *Beyond – expectation. Off the register*.
>
> [That could be in all kinds of directions.] *Exactly – holding him hostage – he needs a bit of maturity*. They want to know how I found you. *We think in similar ways. We've got the same question about this stuff*. The voices are quiet – they're smiling – they just told me. They told me to see *A Beautiful Mind*. The voices said I'm doing a fine act.
>
> [Yeah? – I thought you were for real.] That's what they meant. The voices told me to tell you the government knows an awful lot about schizophrenia. They are saying I wanted it this way. That they could speak freely to you – well – all right – in a way – never try to go ahead – they are having a hard time going ahead because you are trying to control us. *You really want us to talk and speak freely to her, don't you? Might do it – scientific experiment put on by the government and no one will ever find out about this ever. We haven't even told Mark about this. Very, very few people can do what he can do in his mind. We all know what that means. We say special. He doesn't tell you all he has to tell you. He even audits what we say now. You have no idea about his mental strength. This past year, we put him through the wringer*.
>
> [Sounds like the voices want to scare me off.] *No – we just want respect to be shown. We're all doctors here. Some of us even write books. Mark never stops. He says he could write a book but doesn't know how to type*.
>
> [Takes practice.] They say the notes you are taking will be very valuable someday – not as valuable as some of the conversations.
>
> [You mean between you and the voices?] Yeah – some really deep conversations.
>
> [Can you remember the topics?] Everything – from abortion to human rights to racism to rich vs. poor – all the different topics pertinent in the US and the world – old versus young – interesting things.
>
> [What if the voices decided I wasn't worth trusting?] They know you're worth trusting. They know you're a good doctor. They can tell immediately. They say you've got a good heart. I want to let 'em rip, really talk – give them full throttle.

In the rest of the session, Mark quoted the voices, outlining their plans for him that had not worked out. They alternate between praising him and belittling him, praising and belittling the treatment, talking about abandonment and hinting at grand projects.

In reviewing the many session transcripts, I became increasingly muddled. There was too much important material to include – for example, the voices' persistent introduction of themes of homosexuality, his denied wish to be a bigger success in the world than his father, his denied apprehension regarding his father's failing health, and his oscillating between trust and distrust of me or 'them'. His recent development of a private language in which he speaks with 'them' is his way of keeping me out of this other world altogether.

Over the next two years, Mark worked at various jobs at a sheltered farm. Initially, he rarely mentioned the other residents or staff. He described his solitary walks in the woods where he conversed with 'them'. Soon, very many residents and staff were real friends, richly described in our sessions. His life is more regulated, he is a valued and dependable worker. His plans for his future are more grounded and realistic, and he talks with a priest at the church his family attends. Mark has actually produced a large number of acrylic paintings, all relating to the theme of abortion and its impact, which he feels constitutes an ongoing holocaust. He is working on mastering the software necessary to produce a video using his artwork, which he hopes to show to church youth groups, on the dangers of drug experimentation and abortion, and has received support for this project.

Valerie Sinason

First Meeting with 'Janet', a Mother with Psychosis

Here is an extract at the beginning of an assessment of a woman of 45 who was court ordered to the hospital after a psychotic breakdown following the birth of her son ten years earlier. She made regular suicide attempts. I was ushered into a room off the main ward where Janet Chisholm (*not her real name*) sat huddled in a corner, not using either of the two chairs.

'This is Dr Sinason, Janet', shouted the nurse, as if the slight huddled woman was hearing impaired. As is so familiar in many hospitals still, patients/clients were called by their first names while staff had formal titles. The nurse left the room, saying to me, 'Press the panic button if you need me. She can turn nasty.' I sat on a chair furthest from her but not the side of the room where the door was. I had long ago learned to make sure the client always had the easiest access to the door.

> '*Hello, my name is Valerie Sinason and you can call me Valerie or Dr Sinason, whatever you prefer. How would you like me to address you? Janet or Ms Chisholm?*'
>
> There was a small movement on the floor as a tired face with enormous haunted eyes focused on me for a moment.
>
> 'Address me? … Like an envelope. I am a cheap white envelope of skin brimming with water and blood and urine. If you open the envelope I will melt down the pipes and enter your tap water. Address nowhere. There is no address. The seventh circle, lost in translation.'

'*A cheap white envelope, with no home, no real address, who could just drip into taps and water.*'

She looked up with a bit more energy.

'Do you have an address? Do you live with God or Jesus? Are you from this planet or have you come from another one but have disguised yourself?'

There was a little pause.

'*I am a stranger here. You have never met me and you don't know if I am from another planet, what religion I am, anything about me. That is not fair. And all I know about you is that the staff asked me to see you because they were worried you hurt yourself so much.*'

At the sound of the word 'hurt' she suddenly leaped up with great agility that shocked me and sat on the chair facing me. I looked at her tiny hunched form that remained athletic and had the image of a homing pigeon. The word 'hurt' was her magnet home.

'Can you see your name hurting me Dr "Sin A Son"? I am a daughter, an unwanted daughter. The letters of your name are hurting my ears. When the nurse told me, the telephone wires exploded in the ward. They come under the walls and through the ceilings and all the phones were laughing at me.'

She started crying and wringing her hands. I spoke very softly to her.

'*I am so sorry that with all you have gone through you had to hear my name. What a difficult name for you, especially as you are a daughter. I wish I had a different name so the telephone wires and telephones would not have joined up and laughed at you, but it is the name I was given.*'

There was a pause and Janet took a deep sigh.

'I accept your apology. The wires have gone back to their homes in the underground or on streets where they are held in special black boxes. The laughter has gone back into the telephones. It is not your fault that you had this name. It is not my fault that I was born a daughter in sin because of the sons of Cain.'

There was a sad silence.

'*It is not your fault that you were born a daughter in sin but the sons of Cain have hurt you.*'

'My baby was a boy.'

'*Your baby was a boy.*'

'Yes. A sin, a son. A son of Cain. He should have been safe. He should have been an unwanted daughter. I would have wanted her. Not the wanted notices in cowboy films not wanted to be killed or sexed after. My own sin.'

'*You really wanted a daughter, a baby girl. You would have wanted her and cared for her even if other people didn't, but then you got a baby boy.*'

She held her arms into the shape for holding a baby, a look of love on her face. It was unbearably poignant. Then she threw the shape away and started rocking and keening.

'My baby I threw into the walls and the universe went red and his cold icicles in his body that kill him like the Snow Queen and he sees his mother's eyes stabbing him through the walls. And the metal bars can't stop my eyes stabbing him.'

Her cries got louder and she began to bang her head against the wall. I was nervous the nurse would return and destroy the link made.

'*Am I allowed to move nearer to you?*' I asked.

Her banging slowed down, longer pauses. I moved slowly forward, checking each time it was not an intrusion. When I was so close to her that our knees could touch if I moved one tiny inch forward, I held out my hand.

'*Your baby is not dead. He is alive. You have been hurting yourself here to protect him.*'

My hand stayed outstretched.

'*Your sad eyes have cried and cried and you have tried to turn your eyes and heart to ice but it does not work.*'

She reached out for my hand with both of hers and then her head was on my lap while she sobbed and sobbed.

Dissociative Identity Disorder: Work with 'Cassandra', a Teenager with Down's Syndrome

Cassie had dissociative identity disorder (DID), a learning disability, Down's syndrome, and was 17 years old. She was referred by her parents because of her disturbed behaviour following an investigation into abuse in her respite care centre. Cassie came, an immaculately dressed 17-year-old, with her loving parents Peter and Hetty. I said my name was Valerie Sinason and they could call me Valerie or Dr Sinason and how would they like to be called? Cassie looked sharply at me and said, 'Doctors are fuckers and kill babies. Are you a doctor? Do you do the fucking and kill babies?' Her parents looked devastated and apologized to me. 'Sorry parents. Sorry.' She smiled at me. 'It was my other Cassie who said that.' '*Your other Cassie*?' I asked. 'She keeps talking about herself like this, in the third person. She never used to, or I never noticed. Everything is so different,' said Hetty.

'*How is your other Cassie*?' I asked. Cassie leaned forward with great intensity. 'My poor Cassie doesn't understand about the bad language. Sorry Mum and Dad. I try to teach her but she doesn't understand.' I said: '*That must be very hard, trying to teach the other Cassie not to swear and worrying about doctors who were fuckers and killed babies.*' Both parents flinched and I said sorry to them but it might be important here for Cassie to have her words reflected back. Cassie's face went red and then pale and, with the most anguished expression on her face, she said in a soft voice, 'Please, please help. Please help my poor parents. Please help my depressed dad. He is on tablets. And they are not my real parents but I love them.'

'*You really love Peter and Hetty don't you, Cassie?*' 'Yes.' '*And they really love you.*' 'Yes,' she said and she breathed slowly and gave a big sigh. '*So even though the fuckers frightened you they haven't been able to stop you all loving each other.*' Cassie took another deep breath. 'So will you help me?' I asked her how she would like me to help her. 'Well, I need help with the other Cassies and there is Beebub, Lith and –' '*That's a lot of people you need help with*,' I commented.

'*Do you think you feel OK enough with me to have a bit of time with me by yourself*?' Cassie nodded. She stood up and froze … She turned to her left and pointed into the mid air. 'Now you be good in here for my Hetty and Peter,' she said. '*Who is there?*' I asked. 'It's a Cassie,' she replied. 'And a Cassie who bangs her head against the wall all the time, real handicap behaviour.' '*Would she like to come in with us?*' I asked. '*If she bangs her head she might need some help, too.*'

Cassie beamed the most beautiful smile at me. She turned round and with great grace beckoned the invisible Cassie to come with us. 'Valerie doesn't mind you,' she said. 'So just come along with us. No trouble.'

After a short period in the therapy room, she turned to me very nervously to tell me something important. 'It is Todd and Linden and Beebub and everyone. Beebub is very bad.' Her voice turned into a whisper. 'Don't tell my Hetty. Beebub killed a baby. Just like that. Don't tell my Hetty. Beebub frightens me. Beebub frightens all the Cassies.' I said: '*This all sounded very frightening – very dangerous. Killing a baby, frightening the Cassies. Who was Beebub?*' Cassie went pale and looked round the room desperately. She pointed at the ceiling and then crouched on the floor suddenly with shocking agility, looking under the sofa. '*Do you think Beebub is in the room?*' I asked. 'Yes.' '*And the other Cassies?*' 'All my girls are here,' she said sadly, as she settled back on the sofa.

I said hello to them all and introduced myself.

Cassie suddenly leaped off the sofa, her face full of venom and shouted in a chilling voice: 'Die, bitch. You don't know.' Her face was close to mine and spittle from her shouting came onto my face. '*You are right,*' I said, '*I don't know. Is there anything you know that you think I should know? How can I help you?*' Cassie stood frozen, a flush went over her face and her eyes filled with tears. 'Sorry. Sorry,' she whispered. 'I am bad.' She started to slap her face. '*Cassie,*' I said, '*Why do you think you are bad?*' 'I couldn't stop her shouting at you.' '*Who was it who was shouting?*' I asked. 'Lith and Beebub.' Her face flushed again and the chilling voice returned, 'Stupid Mongol can't even say names properly. Lith … Beebub … handicap language.'

Just as I was about to speak, Cassie's face froze and then her eyes filled with tears. '*You're back, Cassie,*' I said. Cassie looked at me. 'Is that what it means? Is that what it is? I gone and I back? Gone and back?' '*Yes,*' I said. '*Like the light.*' And I pressed the switch for the little lamp that went on and then off and on again as I pressed it. '*You have a go, Cassie,*' I suggested. Cassie brightened up. 'Right. I am going to be back now.' She switched the light on. 'Now I am going to be off.' She switched the light off. She looked at me in surprise. 'But I am still here.' I said she was not the same as the light. The light could go on and off while she, Cassie, stayed on. Cassie was thrilled with that and spent the next 15 minutes turning the light on and off. I thought it a very therapeutic activity.

I asked Cassie if she would like us to join up with her parents now to discuss what to do next. 'Can I tell them about switching the light on and off?' she asked. '*Yes. You can tell them anything you like.*' 'You are going to help me, aren't you?' said Cassie. It was a statement and not a question and of course I commented on how she had helped herself.

After five years of work, Cassie understood her system and what triggered it and Valerie Sinason had met all her alters. 'Lith' turned out to be 'Lilith' and 'Beebub' was Beelzebub. A slow process of understanding was under way.

Treating Dissociative States

Certain simple principles unite all therapeutic endeavours. They relate to the social rules we learned in the earliest phases of our human social education, rules like 'Try putting yourself in the other person's shoes, and imagine what it's like to be him.' 'How would you feel if someone said that to you?' 'People remember the nice things you do for them, especially if they are lonely.' 'Nobody likes being told how to think.'

Psychodynamic work with someone struggling with psychotic difficulties is the work of two unique humans finding increasing common ground, the area of overlap in a Venn diagram, with this firm ground becoming the place of safety for both of them. One safe relationship makes it possible for the patient to find that safety in other relationships, those with people he or she is meeting for the first time, or ones such as family who have been with him 'forever'. This safety develops if the therapist can 'hold' his or her feelings of ignorance, inadequacy, confusion, and dread and the impulse to run away. The mentally retarded patient refers to her 'poor brain'; while the psychotic patient defends against the sense of having a 'poor mind'. If the therapist can be satisfied enough with his or her mind, gradually, the patient can incorporate this sense of mental adequacy.

Our relational attitudes aim at encompassing the various theoretical schools. We do believe it is an error when the clinician decides the treatment outcome. Some clients have a wish to integrate, become co-conscious, or 'multigrate' (Southgate, 2002); others know they cannot and will have to stay multiple. Meeting a clinician who holds the view that the patient with DID should only be addressed by the birth name regardless of which alter-personality is speaking therefore poses an iatrogenic limitation to the work.

Some clinicians feel it would be collusion with a delusion to treat different alters as if they were different people. The people we treat experience such responses as abusive at best and paternalistic at worst, echoing for them, as it does, the disregard for their psychological reality that their attachment figures showed. Some are silenced and obey in order not to be court-ordered to a hospital or kept in hospital longer. A victory is then claimed for 'integration'. 'Don't you understand?' said one, 'it is unbearable having to keep everyone imprisoned and not allowed out. But that is what I have to do to survive there (in the psychiatric hospital). Even though they may see that (the silence of the alters) as winning their nasty little behavioural game there is no alternative while my condition is not understood' (Sinason, 2002). Similarly, dismantling a 'psychotic' fantasy or narrative for the sake of the analyst's own sense of reality can be similarly damaging.

The Role of Trauma in Creating Psychopathology

Carl Jung ended a public lecture to the people of Zurich on the 'Content of the psychoses', held just as he and Eugen Bleuler were formulating the concept of schizophrenia, by concluding: 'Even the most absurd things are nothing other than symbols for thoughts which are not only understandable in human terms, but dwell in every human breast. In insanity, we do not discover anything new and unknown; we are looking at the foundations of our own being, the matrix of those vital problems on which we are all engaged' (Jung, 1908/1960, p. 178).

Dissociation, like all psychiatric symptoms including psychosis, is part of the human condition. It may be intrinsic to all mammals, a response to terror as well as ongoing stress, as we see in the catatonic response of 'playing dead' when the predator is breathing on one's neck. While we commonly say that children cannot absorb the knowledge that all living beings die, death anxiety seems part of animal existence (Becker, 1973). As Winnicott wrote in his posthumous paper, 'Fear of breakdown'

(Winnicott, 1974), we fear breakdown to the extent that we experienced it before we had words, and thus before we could hold these experiences in verbalized memory. We hold them in our bodies, and these body memories hold our fear of death and psychosis. Perhaps we all have used psychotic (timeless) defences against this terror, and perhaps this explains the general avoidance on the part of neurotic folk of those stuck in psychosis.

Groups as well as individuals can use dissociation as a defence against anxiety. Professionalism has made dissociation a crucial part of its armour. Think of the physician talking solemnly with the family of the patient who has just died due to his or her medication error. Think of any soldier obeying an order to attack, or a fireman entering a burning building. Even in non-threatening and relatively mundane actions such as the process of making diagnoses, the clinician 'tunes out' the commonalities between himself or herself and the patient. Part of becoming a professional is the near-requirement that we master the defence of dissociation, and thus become acknowledged as 'authorities' worthy of high earnings. Are we 'good' mental health professionals to the extent that we hide our 'pathologic' aspects? As Warren Schwartz (2008) has said 'dissociation is what holds us together'. Can we 'really' treat psychosis if we are dissociating from, disowning, our own psychotic aspects? Aren't we all 'cases' if we page through the DSM as we would through a clothing catalogue, seeing what would fit (rather than what would look good on us)? Does a strong professional veneer impede or foster our relationships to patients suffering from psychosis? These paradoxes reflect the inherent reliance we each place on 'healthy' dissociation.

Focusing on psychosis, Robert Young, Professor of Psychotherapy and Psychoanalytic Studies, University of Sheffield, pertinently asked: 'Why are psychotherapists and psychoanalysts, on the whole, way out of touch with psychosis and why are most psychiatrists equally (perhaps more) out of touch with psychodynamic formulations of psychotic phenomena?' (Young, 1995, p. 34). Trauma, whether intrapsychic or external, is not popular. When it is both internal and external the already depleted numbers of practitioners shrinks further. Work with DID is even more out of touch in the UK. What is unique about DID is that, since the early 1980s, theory and research have supported the hypothesis that severe abuse is intrinsically related to the development of dissociative difficulties (Goodwin & Sachs, 1996; Nijenhuis, 2004; Waugaman, 2000).

As is clear in working in any mental hospital, all clinicians bring their personality to bear on each treatment. Each dyad is unique; the clinician's 'theoretical position' or the patient's 'diagnosis' tell us next to nothing about how they work together. Each clinician brings strengths, flaws, and trauma history – the latter only minimally disclosed to peers (Davoine & Gaudilliere, 2004). In staff conferences, we learn much about the patient's strengths, flaws, and trauma, but can only infer those features in the professional presenting the course of the particular therapy. We learn more about the staff member at that person's funeral than we ever knew in our time together. That is, we form competitive groups, without openly acknowledging our competition; we compete in regard to our awareness of our countertransference and regarding our therapeutic capability. This contributes to a tendency to question the accuracy of the original diagnosis when a patient does recover from a psychosis that was labelled 'schizophrenia' at the outset. 'Wasn't she *really* a severe borderline?' We are not so different from the 'layperson' who considers psychosis an incurable specific brain disease. We

compartmentalize to an extent that could reflect our own dissociation from our own psychotic features.

In Douglas Hofstadter's book, *I am a Strange Loop* (2007), he uses the analogy of the video camera pointed at a television screen, producing an infinite regression of images of the borders of the screen (which appear as a *strange loop*), to define selfhood as the temporal cohesion we all make of our life experiences. Our sense of 'I' is the revisiting of our self-reflections, our unique 'strange loop'. We carry within these loops our own versions of the strange loops of those we are close to, and these are vital when a loved one dies. Hofstadter says: 'To varying degrees, we human beings live inside other human beings... The interpenetration of souls is an inevitable consequence of the power of the representationally universal machines that our brains are. That is the true meaning of the word "empathy"' (p. 266). He does not discuss psychopathology, but he comes to consider the 'I' as a 'hallucination hallucinated by a hallucination'. But if this 'I', this hallucination, experiences a massive and horrifying disruption, losing its sense of self-reflective continuity, it must then struggle to re-establish meaning and selfhood. Without a cohesive sense of self, conflicting viewpoints become externalized combatant forces, dissociated from the now tenuous 'I'. 'Internal' and 'external' become a swirling conflict-ridden boundary-less muddle.

In losing 'I', one loses an intrinsic sense of self-worth. 'Intrinsic' is gone, and in pondering the question, 'Are the voices real?', the patient asks the question 'Am I crazy?', which equals, 'Am I even less than worthless?' or 'Should I be shunned and dreaded?' The shattering trauma of the psychotic break is compounded by the repeatedly shattering effect of this almost unthinkable question. Explanations and reconstitutive efforts require new 'people' to fill the enormous agonizingly lonely void, and the profoundly lonely psychotic person creates them. The fractured strange loop cannot reconstitute itself without an other who keeps that fragmented former soul 'in mind'. The mindfulness of the therapist's 'I' who is trying to make sense of the fractured other can then be incorporated by that other, and together they then can gradually constitute an 'I' in the one who was transformed by psychotic terror. Psychosis itself *is* a trauma disorder, involving profound and complex dissociations.

Conclusion

These clinical vignettes illustrate the fundamental rules of therapeutic work with those suffering from mental retardation, brain injury, dissociative disorders, and schizophrenia (Aron, 1992; Fromm-Reichmann, 1950, 1959; Karon & Vandenbos, 1981; Kramer, 1995a, 1995b; Prouty, 1994; Prouty et al., 2002; Ross, 1989, 2004; Searles, 1965; Silver, 1989, 1997, 2002; Sullivan, 1953). Listen carefully and respectfully, without confrontation. Walking together, or sitting at an angle, allows both participants to look ahead, not just at each other. Mirroring, repeating what one has heard, works better than asking (demanding) questions. Work to minimize anxiety. Therapists should keep their responses short and simple. Know that trust develops gradually, whatever the patient's diagnosis; we cannot rush the season. We all strive for increasing security and happiness. The therapist and the patient's healthy ego team up as the patient grows to trust the relationship. The therapist does not cure the patient; the process facilitates the

patient's emotional growth and strength. Our interpretations have limited value by themselves; we all almost universally missed histories of sexual abuse until the 1980s and missed dissociative states as well, proof of the universality of the human defence of dissociation. And while we hope all our patients will recover, some do not and some choose to end their lives. But others manage to learn how to live alongside a disability, which is all, really, any of us can hope for.

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27

Dissociation, Psychosis and Spirituality

Whose Voices are We Hearing?

Patte Randal, Jim Geekie, Ingo Lambrecht, and Melissa Taitimu

Whose voices are we hearing when we consider unusual experiences to be signs of psychosis, as opposed to dissociation or spirituality? Research has shown that phenomena such as hearing voices, experiences of derealization and depersonalization, or odd beliefs alien to one's culture or subculture are more common in the general population than are the diagnostic conditions whose presence they are usually assumed to indicate (Poulton, Caspi, Moffitt, et al., 2000; Tien, 1991). Despite this, these experiences are generally not considered normal or commonplace and, as such, will be referred to as 'out-of-the-ordinary' experiences (OOEs). In this chapter, we are not concerned so much with OOEs in themselves, but with the different ways in which they can be understood, the context within which this understanding takes place, and the impact various understandings have on the person experiencing OOEs and on those around him or her. Thus, the question posed by our title, 'Whose voices are we hearing?', is not only about the subjective experience of hearing voices, but also, more importantly, about the theories of explanation available to account for such OOEs. Our discussion of these issues is located within a social framework as we consider the importance of power relationships in determining who is mandated to provide an explanation for these experiences. After an overview of relevant theoretical concepts, we 'flesh out' our ideas by presenting the personal experience of one of the authors (Randal) and by exploring ways of understanding OOEs in different cultural contexts.

Given the personal nature of the experiences presented here, it is appropriate that you know some things about us. We all have lived and worked in New Zealand (though only one of us was born here). Melissa Taitimu is a New Zealand Māori researcher and clinical psychologist who descends from the tribes of Te Rarawa and Te Aupouri. She is a spiritual person (though not religious) who has encountered experiences herself and within her family that may be variously defined as psychotic, spiritual, or dissociative in nature. Another co-author, Jim Geekie, is an atheist brought up in the Catholic faith, who currently works as a clinical psychologist in a first-episode psychosis service. Ingo Lambrecht is a clinical psychologist working with people suffering from psychosis. He was privileged to train as a South African shaman (*sangoma*). Access to *sangomas* provided the basis for his PhD research concerning shamanic trance states. Finally, Dr Patte Randal trained in psychiatry and has worked in the field for 30 years; her story will follow.

Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
© 2019 John Wiley & Sons Ltd. Published 2019 by John Wiley & Sons Ltd.

The causes and meaning of the kinds of OOEs associated with diagnostic terms such as 'psychosis' and 'dissociation' are open to dispute and disagreement. Indeed, the very terms 'psychosis' and 'dissociation' are themselves competing attempts to account for these experiences, with both concepts being located within a broader *mental health* framework of meaning. Another framework which has been proposed to account for these experiences is that of spirituality and 'spiritual emergency', a term coined by Grof and Grof (1990). They define *spiritual emergencies* as:

> critical and experientially difficult stages of a profound psychological transformation that involves one's entire being. They take the form of non-ordinary states of consciousness and involve intense emotions, visions and other sensory changes, and unusual thoughts, as well as various physical manifestations. These episodes often revolve around spiritual themes; they include sequences of psychological death and rebirth, experiences that seem to be memories from previous life times, feelings of oneness with the universe, encounters with various mythological beings, and other similar motifs (Grof & Grof, 1990, p. 31).

In these states, people can present as disoriented, fearful, experiencing hallucinations, delusional, affectively dysregulated, and having interpersonal difficulties (Randal & Argyle, 2006).

This by no means exhausts the range of available frameworks of explanation. In addition to the variety of clinical and professional understandings of OOEs, research into the subjective experience of psychosis shows that clients of mental health services develop complex and multi-faceted explanations for their own experiences, explanations which have been shown to have therapeutic value (Geekie, 2004; Geekie, Randal, Lampshire, & Read, 2012). Such is the extent of the contest for the meaning of OOEs that we propose that these concepts are what the philosopher Gallie (1955–1956)) has referred to as 'essentially contested' concepts: that is, concepts which are *inherently* contestable (see Geekie & Read, 2009).

The *contest* for the explanation and meaning of OOEs does not take place within a politico-historical vacuum. Rather, it occurs within social contexts, where power relations have an important impact on which perspective comes to dominate. Foucault's (1980) analysis of the relationship between 'power' and 'knowledge' is helpful in drawing attention to the pluralistic nature of knowledge and the tendency of the dominant discourse to 'subjugate' discourses (such as that of individual subjective experience) that challenge its hegemony. A related useful concept is Shotter's (1981) notion of 'authoring', which is the 'moral right' of the individual to 'decide what his experience means to him'. Geekie's research (Geekie, 2004; Geekie & Read, 2009) shows that *authoring*, and challenges to this through *invalidation*, are significant concerns for clients of a first-episode psychosis service.

We will use the above concepts to explore OOEs associated with psychosis and dissociation. The contested nature of OOEs, the power relationships within which this contest takes place, and the personal importance of *authoring* are not mere academic concerns. They are important considerations which have crucial impacts on our lives, on both an individual and a cultural level. We will show how the way in which OOEs are

understood and related to is central in determining the impact these experiences have, as well as the course and outcome of such experiences.

A Cosmic Battle: Patte's Story – Part 1

The following is a detailed account of events from 1976 and a brief account of the subsequent 10 years.

> I was 24, halfway through my medical training, having begun research for my DPhil thesis. I'd had a baby, my marriage had failed, and my father had died. I was also on the verge of falling in love with my supervisor, and at some point had a puff of marijuana. As if this wasn't enough, two of my friends lost babies to cot death within a week of each other.
>
> Suddenly one night, I found it hard to sleep, and yet felt full of energy. I spent much of the night writing furiously, expressing everything I knew about the purpose of life. In moments of a fitful sleep-like state, I experienced a gradually intensifying sensation of physical arousal and terror to the point of total obliteration, alternating with an intensifying feeling of orgasmic, ecstatic joy beyond joy. I was caught up in a cosmic battle between fear and trust. Ultimately, it was the sense of joy that stayed with me. In the morning, I rang my friend whose baby had just died and said: 'I know this sounds strange, but everything's going to be OK.'
>
> I raced off to the university, feeling elated at the possibility that the world had changed. Suddenly, I was the Mother of the World and the laws of gravity no longer applied to me. I stepped off the top of a flight of concrete stairs, and fell 15 feet to the ground. Feeling great pain, I 'realized' that I had broken both my legs. I saw two students passing on the footpath below me. They both appeared beautiful, golden, God-like. I called out to them, 'Do you believe in miracles? Can you heal me?' They glanced at me and walked on. To me, that meant that they must have healed me, otherwise they surely would have come to my aid. I jumped up, amazed at the miracle of healing that had just taken place, and ran through the university, greeting everyone I saw with a hug. 'We're all the same!' I shouted, 'We're all the same.' We're all God-like, I thought, and rushed into the Student Health Centre, down the corridor, and straight into the room of my therapist, saying to the young woman who was in there with him, 'You don't need to be in here, you don't have to be a patient – we're all the same!'
>
> I don't recall exactly what happened next, but I ended up in the university sick bay, where my bleeding and bruised, but – in reality – not broken, legs were bandaged, and I was forced briefly to take chlorpromazine, which resulted in cholestatic jaundice (apparently, a very rare side-effect) that left me physically sick for three months. At the time, I believed the whole episode had been a mystical experience, though this did not fit easily into my world view. I had been trained as a scientist, and brought up by a secular atheist Jewish mother and agnostic father. Somehow I sensed that what happened had something to do with earlier confusing experiences of childhood sexual encounters with a much-loved uncle. As a child, I had tried to tell my mother about it, but she denied that it

could have happened. In retrospect, I understand that she had been a motherless child herself, having lost her own mother when she was nine and, as a result, her anxiety overwhelmed her capacity to cope with my distress. Once I had recovered from the medication side-effects, I resumed and completed my DPhil, and went on to complete my medical training. I became a GP, and then began my training to be a psychiatrist. My extraordinary experiences had left me with a strong sense of 'pathway' in my life. I knew my life had a purpose, but because I had no world view with which to make sense of what had happened, I was unsure quite what that purpose was.

Māori Perspectives

The indigenous people of New Zealand, the Māori, use alternative understandings for experiences similar to Patte's. In her PhD research, Taitimu (2007) investigated Māori healers', service users' (with a diagnosis of schizophrenia), and clinicians' understandings of this range of phenomena (i.e. OOEs). This research revealed that Māori believe in shamanic-type initiation crises as the explanation for some distressing OOEs that Western clinicians might construe as psychotic symptoms: 'People diagnose it as that thing [schizophrenia], but we would say he was a divine healer. If I ask if a person has these things, what would you call them? We would say a healer. But they say sickness and diagnose' (Taitimu, 2007, p. 34). One healer (*tohunga*), who worked with a mental health service, indicated that he often helped individuals with a diagnosis of schizophrenia to understand their experiences as a gift.

Taitimu (2007) reports that *mate Māori* (literally, 'Māori illness') is a construct commonly used to describe OOEs associated with diagnoses of dissociation and psychosis. *Mate Māori* is characterized by various illness states that all relate to some form of spiritual crisis. One participant (healer) commented:

> I would put schizophrenia with the same thing as *porangi, pohauhau, wairangi* (states of *mate Māori*), all those different states of confusion. My understanding of schizophrenia is like having two or three states of that confusion. Schizophrenia is so big, it's one word but covers a lot of things. The same applies to *porangi, pohauhau, wairangi*, they cover a lot of things in themselves. But those are Māori words that I know that cover those things, that is *mate Māori* (Taitimu, 2007, p. 34).

Porangi is at times used as a stigmatizing label within Māori communities. However, Taitimu found that *porangi* actually refers to a form of spiritual crisis. Glavish (2000) elaborated that the '*po*' (night or darkness) in *porangi* is akin to feeling lost, a feeling of total despair with nowhere to turn, while '*rangi*' (sky, day) refers to the sky (the *atua* or god) that the individual is trying to reach – but it is out of their reach. A similar definition was provided by a participant in Taitimu's research: '*Porangi* is that the poor person is in darkness, his mind is in darkness. If we go back to *rangi* and *papa* and his mind is in darkness, he doesn't see any light at all, his world is in darkness' (Taitimu, 2007, p. 35).

This notion of sinking and reaching resembles Patte's experiences of oscillating between fear of total obliteration and extreme joy and trust. '*Te po*', within a Māori context, is a state of nothingness and lifelessness, before there was time and space in the world, while *rangi* refers to the time when light and knowledge entered the world. In this sense, *porangi* refers to the dissociation one may experience when caught between these two states: a loss of sense of self (the terror of obliteration referred to in Patte's story) and total connectedness (joy and trust in Patte's story).

Shamanic Crisis

Shamanism can be defined as a family of traditions across the world whose practitioners focus on entering altered states of consciousness in a voluntary manner, often through inductive techniques. In these states, they have experiences of interacting with spirits, beings, and ancestors or travelling to other realms in order to heal and serve their communities (Walsh, 2007). Shamanistic constructs and technologies are found not only in yogic and Buddhist practices, but also in many other religious and modern mystical movements (Doore, 1988; Harner, 1990; Hultkrantz, 1988).

During a shamanic initiation crisis, some trance states could be seen from a Western psychiatric perspective as psychotic states with extreme distress. For example, a Tamang shamanic apprentice in Nepal who is possessed by voices will shake convulsively, be confused, not eat, have distorted visions, and seek solitude (Peters, 1987). Similarly in South Africa, the Zulu and Xhosa traditions differentiate clearly between OOEs that require healing (*amafufunyana*) and shamanic initiation illness *(ukutwasa*; Ngubane, 1977). Whereas *amafufunyana* has negative connotations of suffering and affliction, *ukutwasa* is part of a painful transformatory process towards becoming a shaman. However, both categories could be perceived from a Western psychiatric standpoint as including psychotic symptoms (Niehaus et al., 2004).

In other cultures, not all psychotic symptoms are by definition signs of a debilitating illness. Ingo Lambrecht, currently working at a Māori mental health service in Auckland, has worked with persons who hear ancestral voices that arose from breaking a *tapu* (taboo), that required more shamanic interventions (Lambrecht, 2014b). Equally important is the need to address *makutu* (witchcraft) which could be seen as severe paranoia; through respectful therapeutic work, a person can achieve new relations with others without needing to give up their world view (Lambrecht, 2017).

When OOEs are considered indicative of an initiation illness, crises and bizarre behaviour are explained in terms such as 'the ancestor's attempts in shifting a talented but resisting person into the healing profession'. Within the shamanic tradition, Ingo Lambrecht was told during his own shamanic apprenticeship that the pain would lessen 'as the relationship between the ancestral voices and the apprentice improves over time'. Ingo recalls asking his teacher: 'How would I know whether the voices I heard are the ancestors or just me simply going mad?' 'Ah, that's easy,' his teacher replied, 'we *test* them'. The 'true ancestral voices' would be those that, in the eyes of the community, are accurate, for example, in helping to find herbs and lost cattle, or in diagnosing and healing illnesses. The shamanic crisis is usually understood as a *developmental* crisis, strongly grounded in shamanic world view and practices (Eliade, 1964; Halifax, 1979).

In alternative Western discourses, this is similar to a *spiritual emergency* (Grof & Grof, 1990; Randal & Argyle, 2006), a 'mystical experience with psychotic features' (Lukoff, 1985), or part of the 'hero's journey' (Campbell, 1968). When resolution of the crisis occurs, the person appears somehow strengthened by the experience and goes on to become a healer and contribute to their community.

In terms of hearing voices, many people in non-Western cultures maintain contact with their dead relatives or ancestors through trance states in which they converse with the voices of the departed (Steadman, Palmer, & Tilley, 1996). In the South African context, shamans hear their ancestors in their head during divination and while dancing, and see them in dreams or visions. The shamanic training allows shamans to strengthen their relationship with the ancestral voices. Central to the shamanic training is that in her or his developmental transformation, a shift occurs from being a victim of spirits at the beginning to becoming a master of spirits. The shaman is the expert in engaging a meaningful and effective relationship with spirits. The shaman supports the positive and effective relationship with spirit guides and shifts the quality of relationship with negative spirits or voices that could lead to psychosis or a dissociative disorder (Lambrecht, 2014a), so that this becomes a less likely outcome. It is this journey of mastery that allows the shaman to heal themselves in their training in order to heal others by working within the spirit world.

A Cosmic Battle – Part 2

The following is an account of events that took place in 1986 and 1989 in Patte Randal's life and their consequences over the subsequent 14 years.

> Twelve years after my first 'mystical/psychotic experience', having begun training in psychiatry, I found myself being very open with friends and colleagues about what had happened. I felt no stigma. I began formulating a way of working with people diagnosed as having psychosis, to help them make sense of their OOEs. Then a series of events overtook me – another baby, moving house, a visit from my uncle's (my abuser's) son, and marital difficulties.
>
> I was not sleeping much. I woke at 3 a.m. There was an eerie light; I was very cold, all was quiet, my third child was asleep in my arms, my mouth was dry. I was very thirsty, felt extremely cold, and my teeth were chattering uncontrollably. I felt terrified. This must be the nuclear winter, I thought.
>
> Then, three years later, after a series of difficult and stressful events, I found myself being admitted to an inpatient unit, having stopped sleeping and having become increasingly agitated. I lay on the floor, trying to make myself as thin as possible so that I could slip out between the molecules of the wall. When this escape attempt failed, I experienced being somehow rapidly transported towards a gigantic object that threatened once again to totally obliterate and destroy me. I suddenly 'knew' that a senior colleague, who I had trusted, was the Devil (a concept that was not part of my world view). This colleague had encouraged me to develop and write down my ideas about working with psychosis, but later advised me to 'lie low', because other senior colleagues

'were worried about my fragility'. Just prior to this episode, and undoubtedly the immediate precipitant, I was unexpectedly told by the same trusted colleague that I was not going to be allowed to be re-appointed as a psychiatry registrar.

I went on to have five more similar episodes over the next 14 years. At times I was briefly hospitalized, and compelled to take antipsychotic medication, which had severe side-effects for me, the most significant of which was a very rare form of tardive dystonia that affected my voice and made it very difficult for me to speak. I stopped believing that these episodes had a mystical or spiritual meaning, and came to believe that I had a chronic relapsing mental illness, bipolar disorder, the diagnosis I was eventually given. I believed that I would never fully recover and that I would need to be on medication for the rest of my life. I lived for some years with a constant dread that another episode would occur if I were to become too stressed. I felt deeply undermined in my self-confidence and uncertain about the validity of my own reality.

The Subjugation of Other Cultural Perspectives

Patte's initial explanatory model of her OOE as having mystical and spiritual meanings, which had brought a sense of purpose, was subjugated by the dominant discourse of the illness model as an explanation of her 'symptoms'. It appears that this happens frequently within Western cultural contexts; indeed, in New Zealand, traditional Māori cultural views have also been subjugated by the dominant 'voice of psychiatry'. The higher prevalence of schizophrenia diagnoses among Māori than the general population in New Zealand may reflect this (Kake, Arnold, & Ellis, 2008).

This stigmatizing of OOEs by the 'voice of psychiatry' within Western contexts has its historical and political roots in the Christianity of the Middle Ages and the prevalent understanding and fear of demonic forces. Colonial powers executed thousands of witches and sorcerers (including in Europe) and through torture yielded confessions about consorting with spirits and the Devil (Krippner, 2002). To justify this, the shaman, as an expert in OOEs, became viewed as 'the *evil* other', which allowed for easier marginalization and destruction in order to wield power over indigenous people. During the Western European Enlightenment age, this shifted to the shaman being positioned as a charlatan, a trickster in the face of 'glorious' reason and rationality with its scientific method (Flaherty, 1992). The shaman thus became 'the *ridiculous* other', not worthy of interest or importance, which made it easier to colonize those cultures in which shamanic traditions were common. The shaman has also been seen as an '*idealized* other', through the idealization of 'the primitive' and the 'natural' (Krippner, 2002). More recently, psychoanalysis has pathologized cross-cultural differences (Walsh & Vaughn, 1993), and psychiatry has viewed the bizarre behaviour and symptoms of shamans during trance states as psychotic (Silverman, 1967). Shamans are seen as being *schizoid*, 'switching into dissociative states and going into shamanic trances to try to put themselves together' (deMause in Krippner, 2002, p. 966). The shaman, together with people who experience OOEs within and outside Western cultural contexts, has become 'the *mad* other', and is thus excluded from the realm of expertise. It could be argued that this

is essentially what happened to Patte. Her narrative was subjugated, leading her to lose her voice, both literally and politically. She was silenced. However, Patte, as we shall see, *contested* this silence, allowing her to work through her OOEs to achieve an alternative discursive position. This alternative narrative position or voice not only suggests a means of mastering OOEs, but also presents a different way of understanding 'dissociation' and 'psychosis' in relation to 'spirituality'.

Dissociation and Psychosis as States of Consciousness

Traditional Western discourse on consciousness allows only a few 'normal' states of consciousness: waking, hypnogogic/hypnopompic states, dreaming, and sleeping. However, for many millennia, many other cultures, such as Tibetan Buddhism, have acknowledged the existence of more complex models of consciousness. Recently, Western transpersonal psychology has begun to explore some of these models and integrate them into various 'maps' of consciousness (Fischer, 1971; Grof & Grof, 1990; Walsh, 1995; Wilber, 1980). Different maps of consciousness place psychosis, dissociation, and spirituality in different relations with one another.

Ethnographic data from 437 societies worldwide reveal that trance-induced auditory and visual hallucinations are found in 89% of cultures (Bourguignon, 1973). In conventional Western understanding, these hallucinations are pathological (but see Chapters 13 and 24 of this book for an alternate view). However, such trance states, within their cultural and healing practices, are voluntary and experienced positively. Altered states of consciousness (ASCs) can be understood as different mental states triggered or entered into through special induction techniques. For example, sensory deprivation, respiratory techniques, or certain drugs can all be forms of induction, as can voluntarily induced dissociation. Many cultures use various techniques as voluntary dissociative tools in order to induce specific ASCs. Dissociative methods are taught and practised in order to provide the shaman's or *sangoma*'s body with a vessel for the ancestral spirits to enter. In contrast, trauma, psychosis, or coma states could be considered pathological, non-voluntary forms of induction (Vaitl, Birbaumer, Gruzelier, et al., 2005).

In Western discourses on dissociative phenomena, what is deemed communication from ancestral spirits in another culture could be related to an 'inner self-helper', a controversial concept in the dissociation literature (Comstock, 1991). Some people with dissociative disorders have considered this as a form of inner guidance from a separate entity, typically experienced differently from the 'split-off' parts of themselves, and defined in spiritual terms as God, Atman, Christ, ancestors, angels, and so on.

Non-Western cultures may have technologies, practices, and disciplines that could provide theoretical and practical insights into ASCs, trance states, and spiritual states different from common Western views, and thereby provide new insights into psychotic and dissociative states, if only those cultural 'voices' were allowed to be heard. These insights would allow a move away from psychosis and dissociation being merely understood symptomatically and pathologically (as they are currently in most Western cultures). They might rather be considered dynamically as a transformational process of change in consciousness, over which mastery may be gained by specific teaching methods (Lambrecht, 2014a). This perspective may also provide an understanding of how

symptoms of both dissociative disorders and psychosis involve the same or similar psychological processes (Castillo, 2003). Therefore, people experiencing psychotic or dissociative states may, through training, healing. and mastery, shift from being victims of involuntary disintegrative states to greater levels of personal integration and consciousness. A number of people in the West with lived experience of this type of transformational process, often with a background of early trauma, are now speaking out and their voices are beginning to be heard (Coleman & Smith, 2006; Deegan, 1992; Lampshire, 2012; O'Hagan, 1994).

A Cosmic Battle – Part 3

In the past 33 years, since losing and subsequently regaining my place in psychiatry, I have experienced a series of synchronous happenings through which I have gradually developed a spiritual understanding of the universe and my own place in it. This was a very difficult transition for me. The contexts in which I found myself (both psychiatry and my immediate family) existed within an atheistic world view in which science was the supreme arbiter of truth. It seemed, according to the medical/pharmaceutical model, that I had a future which would be dominated by psychosis and mood instability, and would require continuous medication. The move away from this model was no sudden conversion experience, but a process that happened painstakingly slowly and experimentally, with many periods of doubt and uncertainty. In the last few years, I have come to a steady sense that I can view my psychotic experiences as a form of repeated spiritual emergency – 'breaking through' times when I was overwhelmed by circumstances, without a sufficient capacity to contain, process, and acknowledge the intensity and depths of my emotional reactions, and without a world view or framework to make sense of it all. I now can see that in the same way that I very quickly and catastrophically misinterpreted the pain in my legs as meaning they had been broken, equally quickly I misinterpreted body sensations and emotions as indicating that I was literally in a nuclear winter, or was going to be obliterated. In reality, these were lived *metaphors* for how I felt emotionally in my life at the time. I can see now that the emotional reality was too unbearable for me to face, because I may have needed to act in ways that seemed impossible to consider. I have gradually learned to recognize and tolerate my intense emotions of sadness, rage, hate, and shame, so that I no longer need to dissociate from them. Somehow, in developing a greater capacity to acknowledge, face and, experience the intensity of these previously unbearable affects, I'm more able to 'stay with the pain' for its duration. I've discovered that emotions really do come in metaphorical 'waves', and that the waves really do pass; so even though I'm still prone to jumping to (wrong) conclusions under extremes of emotional stress, I'm better able to notice what is happening and make better choices about my actions. Therefore, I suppose, it has become less likely that I will become 'psychotic' (dissociated from intense affect and finding metaphorical ['delusional'?] meaning instead of facing the reality of my situation). I no longer see myself as having 'bipolar disorder', 'recurrent brief psychotic episodes', or any form of relapsing mental illness over

which I have no control. I no longer take medication. I now see myself as being on a journey of 're-covery' (Randal, Simpson, & Laidlaw, 2003; Randal et al., 2009), with the skills to deal with life as it unfolds, and the capacity to help others do the same.

What has helped me is not the shamanic journey I once fantasized I might embark on, but a gradual recognition that the biblical meta-narrative contains my own *whakapapa* – my personal Jewish cultural and spiritual heritage. Within this, I have found narrative accounts that I can relate to in terms of my own lived story and its transformational meanings, 'voices' that I can now 'hear' that have more personal and empowering meaning for me than the voice of psychiatry – for example, the stories of Moses and of Joseph, the pivotal story of the life, death, and resurrection of Yeshua, and also, very strongly, the practice of prayer and the concept of the 'spiritual battle' – that we are not fighting human enemies but are fighting 'a war in the spirit' (Ephesians 6.10–20). It makes sense to me now that, though this cosmic battle continues in 'time', it has already been won 'in eternity'. My struggle for personal meaning has been difficult but of immense value to me, especially because I have now found others who validate and share my hard-won perspective.

In 1994 I was re-appointed to complete my training in psychiatry and won an international essay competition addressing the role of science and the essence of psychiatry (Randal, 1995). In that essay, I argued that it was the quality of the relationship between the clinician and the person that was the essence of psychiatry. I went on to publish research demonstrating that hospitalized people with chronic, so-called 'treatment-resistant', psychosis could, with a multimodal psychotherapeutic approach (including a spiritual dimension), recover sufficiently to live in the community (Randal et al., 2003).

From Victim to Victor – A New Model

I am proud that the heuristic model (and use of the 'resource kit') that I have helped to develop, based on my own experiences, together with my clinical and research experience, and in collaboration with close friends and colleagues, and importantly too with the people we serve, is being taught at a tertiary level in New Zealand and is beginning to find a place globally. The 'Re-covery Model' consists of the notions of 'building a bridge of trust' and a 'map of the journey of re-covery' (Randal et al., 2009). The former depicts the 'bridge' of non-judgemental acceptance and trust we need to build between ourselves – with our values, attitudes, beliefs, experiences, thoughts, feelings, and memories – and the people we serve – with their values, attitudes, beliefs, experiences, thoughts, feelings, and memories. The latter is a spiral developmental model that demonstrates how, from in utero and birth, as we go through life, we tend to 're-cover the same old ground' in our journey of recovery. We are all born with resilience and the inherent vulnerabilities of the human condition. The traumas of life can sometimes make us more vulnerable, and we can get into *vicious* cycles, repeating old patterns which in turn increase our vulnerability. However, with each new life crisis, we have the

opportunity (often in the context of spiritual meaning-making) to increase our resilience and our strengths and decrease our vulnerabilities, and to create a *victorious* cycle. When I use this framework in my clinical practice, and share some of my own experiences, I find that this approach helps to bring hope and healing to the people I serve and their families. I have a feeling of well-being. I believe that all that has happened to me over the years makes sense and has happened for a purpose. I'm finding my voice – metaphorically and literally; after many years of struggling to speak, the wound is almost healed, and my voice is being heard.

Conclusion

In conclusion, we have argued that, whatever difficulties we may have in distinguishing 'dissociation', 'psychosis', and 'spirituality' at a phenomenological level, the way in which we construe, individually and culturally, 'out-of-the-ordinary' experiences and different states of consciousness influences the impact and outcome of these states. How each individual does this will reflect, among other things, their personal situation, experience, and choices (Geekie et al., 2012). The sociopolitical context shapes the range of understandings considered legitimate and available to the individual.

We began this chapter with the question, 'Whose voices are we hearing?' We have considered this metaphor in some detail, and looked at the notions of *essentially contested concepts* and *authoring* in relation to the dominant discourse in Western psychiatry. We have argued that trying to determine the validity of various explanations for these experiences without acknowledging the cultural and political power relationships inherent in these determinations is meaningless and potentially destructive. In recognizing this, perhaps we can move the question from 'Whose voices are we hearing?' to 'Whose voices do we *choose* to hear?' Or to put it another way, when next asked whether a particular experience is *psychotic*, *dissociative*, or *spiritual* in nature, shouldn't we respond, 'Why are you asking?'

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Psychosis, Trauma and Dissociation: Evolving Perspectives on Severe Psychopathology, Second Edition.
Edited by Andrew Moskowitz, Martin J. Dorahy, and Ingo Schäfer.
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